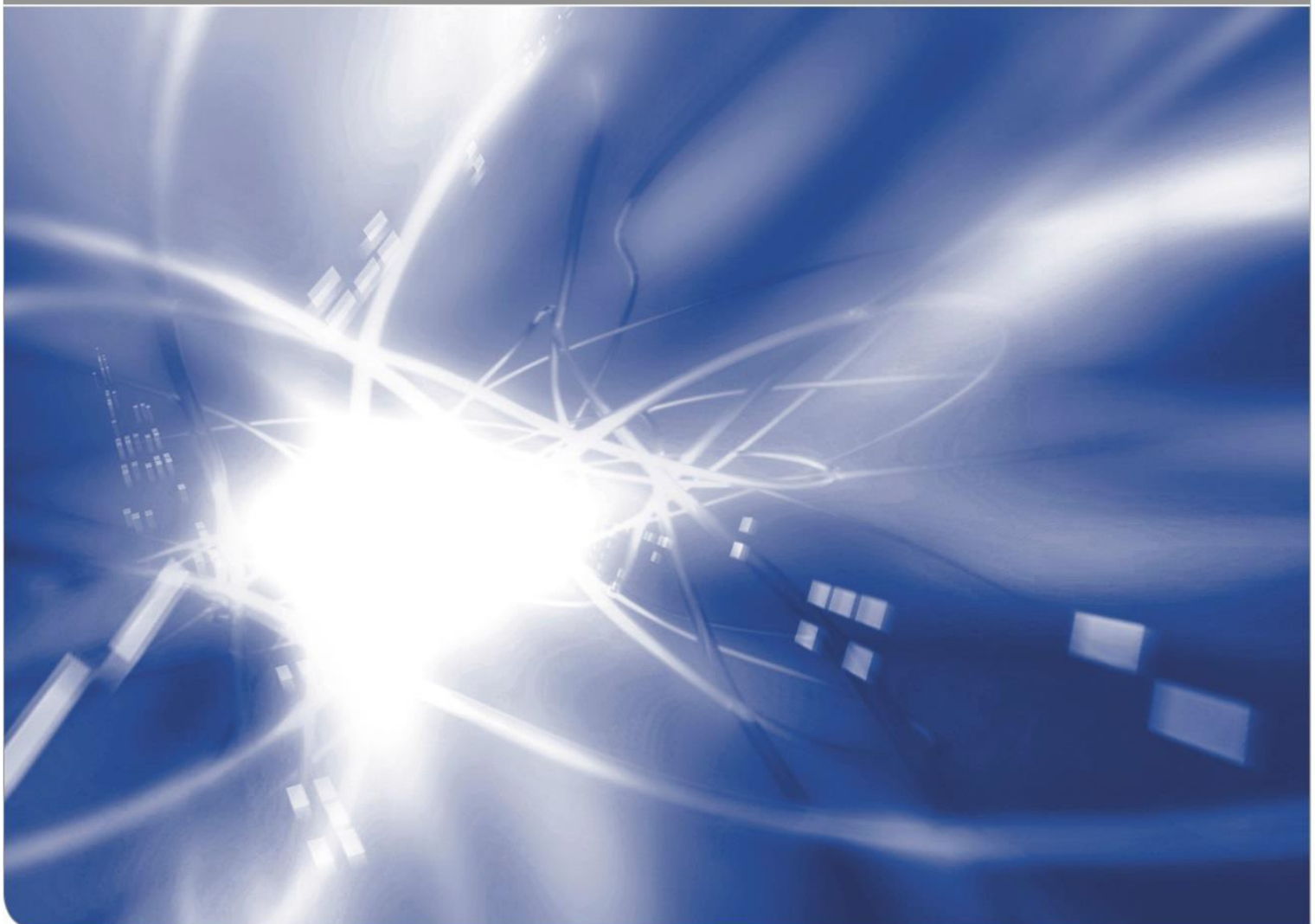


# **The Landscape of Crowd work in Germany**

## ***An overview of the scientific and public discourse***

by Linda Nierling, Bettina-Johanna Krings, Leon Küstermann

KIT SCIENTIFIC WORKING PAPERS 133



## **Institut für Technikfolgenabschätzung und Systemanalyse (ITAS)**

Karlstraße 11  
76133 Karlsruhe  
[www.itas.kit.edu/](http://www.itas.kit.edu/)

## **Impressum**

Karlsruher Institut für Technologie (KIT)  
[www.kit.edu](http://www.kit.edu)



This document is licensed under the Creative Commons Attribution – Share Alike 4.0 International License (CC BY-SA 4.0): <https://creativecommons.org/licenses/by-sa/4.0/deed.en>

2020

ISSN: 2194-1629

# Content

<b>1. INTRODUCTION</b>	<b>1</b>
<b>2. SCIENTIFIC DISCOURSE ON CROWD WORK IN GERMANY</b>	<b>4</b>
2.1. Crowd work as continuation of the flexibility discourse	4
2.2. Crowd work in Germany: Definition and understanding	7
2.3. Crowd work in Germany: empirical evidence	10
2.3.1 Size of crowd work	11
2.3.2. Sociodemographic characteristics	20
2.3.3. Earning possibilities and task duration	24
2.3.4. Empirical evidence from the field of food delivery	25
<b>3. GERMAN MEDIA DEBATE ON CROWD WORK</b>	<b>28</b>
3.1. Methods	28
3.2. Analysis of the media discourse in Germany	30
3.2.1. Who is reporting and when?	30
3.2.2. Which kind of platforms?	31
3.2.3. How are working conditions evaluated?	32
3.2.4. How are campaigns and labour unions taken up?	34
3.2.5. How is crowd work discussed in the platform economy?	36
3.3. Conclusions on the media analysis	37
<b>4. STAKEHOLDERS, INITIATIVES AND COLLABORATIONS IN THE FIELD OF CROWD WORK</b>	<b>39</b>
4.1. Major stakeholders and their initiatives	40
4.1.1. BMAS (Federal Ministry of Labour and Social affairs)	40
4.1.2. Hans Böckler Foundation	42
4.1.3. IG Metall (Industrial Union of Metalworkers)	43
4.1.4 NGG (Food, Beverages and Catering Union)	44
4.1.5. Delivery at the Limit	45

4.1.6. Ver.di (German United Services Trade Union)	46
4.1.7. FAU (Free Workers Union)	47
4.1.8. YouTubers Union	48
4.1.9. German Crowdsourcing Association	48
4.1.10. Taxi and Rental Car Association (BZP)	49
<b>4.2. Joint initiatives</b>	<b>50</b>
4.2.1. The Frankfurt Declaration on Platform-Based Work	50
4.2.2. Website faircrowd.work (IG Metall + several European unions)	50
4.2.3. Ombuds Office (IG Metall + German Crowdsourcing Association)	51
4.2.4. Joint Policy Paper on Digital Work (NGG and BMAS)	52
4.2.5. Riders Day (Delivery at the Limit and NGG)	52
4.2.6. FairTube (YouTubers Union and IG Metall)	53
<b>4.3. Conclusions: Initiatives and actions on crowd work in Germany</b>	<b>53</b>
<b>5. MAIN CONCLUSIONS</b>	<b>56</b>
<b>REFERENCES</b>	<b>58</b>

## List of Tables

Table 1: Estimations of the size of the crowd work phenomena in Germany	12
Table 2: Media contents dealing with the platform economy	31
Table 3: Type of platform, which is the focus of the content	31
Table 4: Evaluation of conditions for crowd workers	33
Table 5: Mentions of labour unions and their initiatives	35
Table 6: Level of abstraction	37

## List of Figures

Figure 1: Sample size and crowd work categories	19
---	----

---

## 1. Introduction

In recent years, a variety of online platforms have emerged that are often considered to disrupt the branches in which they operate. *Uber* is innovating the taxi industry in cities all around the globe, Upwork makes it easier for companies to hire freelancers on demand, and *Lieferando's* customers can get live updates about the exact location of the pizzas they ordered. While these platforms are certainly providing innovative customer experiences, they are also establishing digital labour markets by acting as intermediaries between clients and workers. To refer to this new phenomenon within the world of work, the term *crowd work* has become widespread (for a full definition see chapter 2.2.). Crowd work has been controversially debated in recent years, as some claim that it comes with poor working conditions, while others uphold the benefits of flexibility and efficient digital matching for the workers (Urzi Brancati, Pesole & Fernández-Macías, 2019). At the beginning of the debate in Germany, which is the focus country of this working paper, the creative and innovative potential of crowd work was emphasised. Leimeister and Zogaj (2016) coined the term “crowd creation” for contributions generated by the crowd to solve specified tasks or open questions for companies or other institutions, e.g. for new product ideas, graphic design or IT programming. At the same time, in the German discourse there was an expectation that such new developments would lead to an increased precarisation of work, as stated e.g. in a 2013 report by the Enquete Commission, “Internet and Digital Society” (German Bundestag, 2013: 47). The important question remains how this new type of work can be integrated into the German labour markets under socially acceptable conditions.

Since 2014, German labour unions have identified crowd work as a phenomenon which requires their action, and have included crowd workers as a potential target group, providing different types of support towards their representation (Benner, 2015). More recently, pressure to make progress on the governance of crowd work increased when crowd workers in the food delivery sector started protesting visibly in German cities, which raised media

attention to crowd work. Therefore, it is necessary to ask how far collective action and interest representation of crowd workers can succeed in improving their working conditions. This is the focus of the international research project *Crowd Work – finding new strategies to organise in Europe*<sup>1</sup>. Its main research interest is in assessing the existing strategies of bottom-up movements and labour unions' strategies in the context of crowd work, and to contribute to their further development. The project applies a comparative perspective while analysing the situation in four European countries - Portugal, Spain, Hungary and Germany - to highlight national characteristics of crowd work and analyse the need for coordinated European governance approaches.

This working paper<sup>2</sup> presents the results of the first stage of the research project. It offers a comprehensive overview of the German crowd work landscape, with a special focus on interest representation of crowd workers. It contributes to the existing literature on crowd work in Germany through a systematic analysis of the current conceptual and empirical evidence on crowd work. This is much needed since despite a growing number of empirical studies on crowd work, uncertainty prevails on how to conceptualise crowd work, and the extent to which crowd work has already disrupted employment relations in Germany. Further, it presents initiatives by labour unions and bottom-up initiatives and their influence on German media discourse. The report is based on a range of resources: a literature review, a media analysis, and an overview of relevant stakeholders and their initiatives. The latter was supported by two exploratory expert interviews conducted with trade union representatives.

The report is divided into three parts. The first part (Chapter 2) covers the scientific debate on crowd work in Germany. It highlights the origins of the scientific discourse, discusses challenges in defining the topic, and compares existing studies that aim to quantify the size of the crowd work sector in Germany. The second part (Chapter 3) presents an analysis of how

---

<sup>1</sup> See project description: <https://crowd-work.eu/> (accessed: 11.8.2020)

<sup>2</sup> This working paper is a revised version of the first explorative country report in the frame of the European research project "Crowdwork – finding new strategies to organise in Europe", funded by DG employment (2019-2021) and coordinated by NOVA University, Portugal.

crowd work has been presented in the German media since 2016. It highlights which platforms have received most attention by German media, how working conditions have been evaluated, and how action by either labour unions or bottom-up initiatives has been able to influence the public discourse on crowd work. The third part (Chapter 4) presents the current landscape of crowd work through significant initiatives, actions and protests, describing how crowd work is taken up by different stakeholders in German society (politics, unions, bottom-up movements). The report concludes by summarizing the findings of the three chapters and formulating some hypotheses on the state of the art of crowd work in Germany (Chapter 5).



---

## 2. Scientific discourse on crowd work in Germany

The following presentation of the scientific discourse on crowd work is divided into three sections. Firstly, the phenomenon of crowd work is framed theoretically as the continuity of the flexibility discourse in Germany. Secondly, it is shown how crowd work is defined and discussed within the German discourse. Finally, empirical studies that elaborate on the size and socio-demographic characteristics of crowd work in Germany are presented.

---

### 2.1. Crowd work as continuation of the flexibility discourse

Since the 1990s, an overall increase in the flexibility of employment at national as well as at international level can be observed (Flecker, 2000). Shifts to more flexible working concepts have been considered (critically) since the beginning of the 21st century. Due to significant restructuring processes of value chains on a global scale, there were strong tendencies “to shift demands for flexibility down the value chain, to lower-cost regions, labour segments or employee groups” (Flecker et al. 2009: 94). However, these processes are complex and cannot be explained by simplified models. Differences between sectors, countries and professions have been taken into account and show a wide variety of strategies towards flexibility. One strategy is to outsource processes, which is widespread in “old” industry, such as clothing or food production (Flecker et al., 2009). Another strategy refers to the improvement of the:

*“availability of services, to extend opening hours and to enhance temporal flexibility at comparably low costs. A typical example of this is the outsourcing of customer service activities to call centre companies with lower employment standards and therefore lower costs for flexibility.” (ibid.: 89 ff)*

There is agreement in the scientific and public literature that these forms of flexibility have been shaping the way towards an “on-demand-economy”<sup>3</sup>. There are two powerful forces for this development. The first is the technological advance per se, coupled with the cheapness of digital technologies, and applications and procedures based on these technologies - especially if seen in relation to cost-intensive technology investments in industry. The second is the increasing competition dynamic within work environments, which is changing social habits and forms new patterns of competition (Huws, 2006; Krings, 2018). Both forces characterise what Boltanski and Chiapello call the “new spirit of capitalism” (2005). One phenomenon, which reflects both technology and competition pattern aspects, is the:

*“emergence of digital labour platforms. They include both web-based platforms, where work is outsourced through an open call to a geographically dispersed crowd (“crowd work”), and location-based applications (apps) which allocate work to individuals in a specific geographical area.” (Berg et al., 2018: XV)*

Worldwide, these types of digital labour platforms are observed as new forms of flexibility of employment, with an increasing number of crowd workers<sup>4</sup> involved. From the very beginning, this type of “platform capitalism” (Scrninek, 2016) has been debated critically and has provoked significant concerns with regard to the creation of “decent jobs” (Berg et al., 2018: 1). According to the ILO, for instance, decent jobs, or future models of work, should provide “a fair income, security in the workplace and social protection for families” (ibid. 1). The emergence of digital labour platforms demonstrates the high potential of digital transformation in post-industrial societies. As Drahokoupil and Jepsen describe, these transformation processes touch upon many aspects of future models of work organisation, but above all they have:

---

<sup>3</sup> <https://www.economist.com/leaders/2014/12/30/workers-on-tap> (accessed: 12.09.2019)

<sup>4</sup> See the definition of *crowd work* in section 2.2

*“major implications of how we organise our societies, how we tax, how we regulate labour markets, how we organise our welfare states and, in particular, how trade union actions can address these new challenges.” (2017: 103)*

There is wide agreement in the scientific literature on the disruptive character of the technical options with regard to digital platforms and new work practices (Berg et al., 2018). This disruptive dimension of digital transformations is not without controversy and has triggered an intense debate on the conditions of crowd work on a larger scale. Evaluations of the impact of crowd work on working conditions differ significantly due to the variety of disciplines and perspectives involved. However, empirical evidence on the extent of crowd work, as well as on its increasing importance on labour markets, is provided in many national and international studies. In general, there is significant interest in reflecting, analysing and understanding the emergence of digital crowd work, which presents challenges as well as opportunities.

In Germany, the public and scientific discourse on crowd work was first initiated by the trades unions (Bsirske et al., 2012; Schröder & Urban, 2014). In this context, the risks and uncertainties of crowd work are highlighted. In sociological debates, the main argument also refers to the hypothesis of a profound transformation of work, leading towards a “revolution of the work environment” (Boes et al., 2014: 5), with a huge impact on working conditions, both locally and globally. The potential of digitisation, as well as the establishment of an “information space” (Baukrowitz et al., 2006), have offered huge possibilities for new business models, new strategies of work organisation, and new work models (Schwemmle & Wedde 2012; Kuba, 2016). Trends towards new forms of the global division of work at the beginning of the 21st century are considered to be important enablers for the development of crowd work. According to Howe, the starting point of crowd work has its origins in these processes:

*“...Remember outsourcing? Sending jobs to India and China is so 2003. The new pool of cheap labour: everyday people using their spare cycles to create content, solve problems, even do corporate R&D.” (Howe, 2006: 1)*

This critical point of view refers to the potentially severe impact of digital platforms on employment relationships in the future, and is shared by the trade unions, as well as taken up in sociological debates. However, until now there is little empirical on this aspect (Schmidt, 2017). Thus, there have been several recent attempts to bring theoretical and empirical evidence together. Taking the new social and technical configuration of crowd work into consideration, there is common agreement that there is a lack of conceptual approaches towards crowd work, as “there have been only few theoretical indications to explain how these market organizers actually organize this type of paid work” (Kirchner, 2019: 4; Boes et al., 2014). Poor data on crowd work in Germany, together with open questions about the new quality of crowd work, seem to have led to a boom in collecting data about the German situation of crowd work in the last four years (i.e. Leimeister et al., 2016; Schmidt, 2017; Bonin & Rinne, 2017; Serfling, 2018).

Meanwhile, the significant variety of crowd work in Germany and the limited reach of specific regulatory tools is strengthening the normative idea of developing sustainable work patterns for digital work (see also Berg et al., 2018). This idea has been strongly connected with a comprehensive debate on the “future of employment” in Germany (Boes et al., 2014; Berg et al., 2018). Thus, the idea of creating, searching for and debating new models of future work, so called “Arbeit 4.0” (Hoffmann & Suchy, 2016), is characteristic of the current debate in Germany. However, differing perspectives still have to be integrated. Therefore, information and data on crowd work in Germany seem highly important in order to understand these new models of work and to initiate a (critical) debate based on empirical evidence.

---

## **2.2. Crowd work in Germany: Definition and understanding**

Since 2005, a new form of outsourcing work via the Internet to a “crowd” has started in Germany. This outsourcing work has been termed variously as: “crowdsourcing”, “clickworking”, “crowdworking”, “platform work”, etc. In the following discussion, the term “crowd working” will be used, as it is predominant in the German debate. In this working paper, we follow Serfling’s definition of *crowd work*:

*“we define crowd workers as natural persons who earn at least part of their income by completing paid temporary work assignments allocated through internet platforms or smartphone apps, which are implemented either online or offline. We exclude internal crowdworking platforms, as they only affect the employees of specific companies and thus represent a distinct target group with a separate set of characteristics and needs. Hence, with regards to the employment status, crowd workers can be self-employed, as well as full- or part-time employees, but also inactive persons like students or pensioners.” (Serfling, 2018: 7)*

To understand the organisation of crowd work, the distinction between crowdsourcer and crowd worker is important. While crowdsourcers (companies or institutions) act as clients and outsource their activities to crowd workers, crowd workers are contractors who carry out these activities. Further, the structural prerequisite for outsourcing activities via the network can be coined as the “modularity and granularity” of individual tasks. This means that the value-added task given to the crowd is divided into individual modules (modularity). Within these modules, the individual tasks can have a small scope and can be finely structured (granularity) (Börner, Kehl & Nierling, 2017). The two structural principles – modularity and granularity – allow the crowdsourcers to define, and the crowd workers to accomplish, these working tasks. Thus, in principle, the tasks are given to “the crowd”, in which individual crowd workers decide which tasks are to be processed.

The great attention crowd work is currently receiving can be traced back to the fact that it opens new options regarding the location and the context of value creation. Value creation and value realisation can take place in the online or offline world, can be generated by paid work (formally regulated or not), or even by voluntary unpaid work, i.e. the concept of commodity/commons, as in the beginning of the development of crowd work in Germany. Further, new hybrid forms can emerge at each point in a value chain. All these developments open up a wide variety of new forms of economic value generation, and new forms of working environments, as well as working models (Börner et al., 2017).

A wide range of activities can be summarised under the term crowd work. This includes small-scale, standardized activities; so-called micro-tasks with short processing times (e.g. in the German context, *Streetspottr*, *Clickworker* or *testbirds*)<sup>5</sup>. Activities continue through competitions for design contracts (e.g. *Jovoto*)<sup>6</sup>, to innovative and complex problem-solving offerings (e.g. *twago*)<sup>7</sup> aimed at highly qualified specialists. In general, the business models of these companies vary, and the tasks the workers perform differ with regard to qualification needs, work intensity and payment. For the workers, competitions organized by platforms are highly problematic; often a “winner takes it all” strategy is applied, where only the successful applicant receives a reward for his or her knowledge-intensive creative work, and the applicants who were not chosen receive nothing.

In the last five years, the field of food delivery has emerged as a new type of crowd work<sup>8</sup>. A new quality of this type of crowd work seems to be that it constitutes a specific combination between online and offline services. These services are digitally organised via platforms, although the labour is done offline. The rise of these new services has boosted public attention to crowd work. It can be assumed that the notable public attention to offline crowd work is

---

<sup>5</sup> *Streetspottr* is a platform for retail audits, test purchases or shopping insights via mobile crowdsourcing. It was founded in 2011. Via an app one can reply to small jobs in one's own locality, e.g. a review of product placements in shops, taking pictures of posters. The app has 600,000 users in 25 countries. *Clickworker* is a platform founded in 2005 and has over 1.5 million clickworkers worldwide. Tasks are typically the processing of unstructured data, such as text, photographs, and videos, the creation or the translation of text, the evaluation of pictures, texts or websites. *Testbird*, founded in 2011, has 300,000 testers in 193 countries. It offers the tasks of “tests of software” such as apps, websites and applications to optimise user-friendliness and functionality. Currently, there are over 250,000 registered testers in 193 countries (please refer to the respective company homepages).

<sup>6</sup> *Jovoto* was founded in 2007 and has over 80,000 persons registered. Large brands, but also NGOs, can commission a design or innovation order that is spread to a crowd of creatives in a creativity competition.

<sup>7</sup> *Twago* is platform where different types of freelancer can register, such as programmers, app-developers, designers, translators, or writers in order to get orders via the platform. The company has existed since 2009.

<sup>8</sup> *Foodora* was launched in Germany in 2014. In 2018 and 2019 there have been major movements in the German company landscape of food delivery. In December 2018, *Lieferando's* parent company Takeaway purchased the German brands *Foodora*, *Pizza.de* and *Lieferheld*. Since August 2019, the only remaining competitor, the UK-company *Deliveroo*, left the German market. Whereas *Lieferando* and *Foodora* offer marginal employment based on temporary contracts, *Deliveroo* used to build on self-employed riders.

related to its visibility in public spaces. While online crowd workers often remain invisible to the majority of the population, riders of food delivery platforms - as an example - can easily be identified in urban areas, partly because of their striking uniforms.<sup>9</sup>

In the following, crowd work will be distinguished according to the typology of Vandaele (2018: 10ff.), which was developed for the European context, and differentiates three types of crowd work: Online micro-crowd work, Online macro-crowd work, and Time-and-place-dependent on-demand-work.

---

### **2.3. Crowd work in Germany: empirical evidence**

In recent years, empirical research has begun to estimate the number of crowd workers in Germany and to understand their sociodemographic characteristics. However, according to Serfling:

*“the majority of available studies do not provide representative results concerning crowdworking in Germany, the data can be considered as indicative of certain phenomena and therewith provide evidence as to certain trends.” (2018: 16)*

The situation of crowd work in Germany is presented in this section, based on five empirical reports (see Huws, Spencer & Joyce, 2016; Bonin & Rinne, 2017; Serfling, 2018; Pesole et al., 2018; Serfling, 2019). As described above, the academic discourse on crowd work is struggling to agree on a unified framework to study crowd work. Thus, it is important to highlight that the five empirical studies discussed here agree on the following three aspects, which increases the comparability of the reports:

---

<sup>9</sup> Recently, new forms of offline crowd work have emerged. Since summer 2019, E-Scooters are visible in German cities. Crowd workers recharge them at night, a development which needs to be observed further as empirical data is still rare.

Firstly, all five studies only include remunerated crowd work, which has the advantage of a clearly defined criterion of which forms of online and offline activities are identified as crowd work. The limitation is that further types of work which may be identified as crowd work, such as unsuccessful participations in design competitions at platforms like Jovoto, or voluntary work in the sharing economy, are not included here. Secondly, all five studies refer to all three categories of crowd work as presented by Vandaele (2018), namely micro- and macro-online crowd work and place and time-dependent offline work.

Thirdly, all five studies rely on a concept of the population, which is broader than the labour-force. Empirical evidence in Germany shows that crowd workers are not necessarily part of the labour-force. On the contrary, crowd working activities in Germany are widely observed as a side-job which is increasing slowly within the working population. However, options for crowd work are still mainly used by freelancers, students, part-time workers, unemployed persons, and pensioners. According to Serfling, this is the reason why it could be more reasonable to consider crowd workers as a share of the whole working or resident population, instead of as a share of the labour-force (ibid.: 17).

The comparison will be undertaken in two steps. Firstly, the debate on estimating the size of the crowd work sector will be summarized. As estimations of the overall share of crowd workers are highly inconsistent, an in-depth comparison of the research designs is presented to provide a better understanding of why numbers diverge. Secondly, the sociodemographic characteristics of crowd workers, which are far less diverse than the estimations of the number of crowd workers in Germany, will be summarized.

---

### **2.3.1 Size of crowd work**

Estimations of the size of crowd work differ significantly between 0.85% of German-speaking adults (Bonin & Rinne, 2017) to nearly 12% (Huws, Spencer & Joyce, 2016) of the whole German population (Table 1).



<b>Study</b>	<b>Huws, Spencer &amp; Joyce (2016)</b>	<b>Bonin &amp; Rinne (2017)</b>	<b>Pesole et al. (2018) COLLEEM survey</b>	<b>Serfling (2018)</b>	<b>Serfling (2019)</b>
<b>Percentage of crowd worker</b>	12%	2.9% (0.85% corrected)	10.4%	4.8%	2.6%
<b>Definition of the population</b>	Resident population (16-70 years)	German-speaking resident population (adults)	Resident population (adults)	German electorate (adults)	Resident population in Germany (>15 years)
<b>Data collection Method</b>	Online Survey	Computer-assisted telephone interviews	Online Survey	Online Survey	Online Survey
<b>Sampling Method</b>	Non-Probability sampling	Probability sampling	Non-Probability sampling	Non-Probability sampling	Non-Probability sampling
<b>Sample Size</b>	2180	10017	2292	376750	495000
<b>Type of crowd work (according to Vandaele)</b>	Online (micro & macro) + offline	Online (micro & macro) + offline	Online (micro & macro) + offline	Online (micro & macro) + offline	Online (micro & macro) + offline

Table 1: Estimations of the size of the crowd work phenomena in Germany

In 2016, Huws, Spencer and Joyce published a comparative report on crowd work in Europe (Huws, et al. 2016), which reports that 12% of the Germans, that are between 16 and 70 years old, are doing crowd work.<sup>10</sup>

---

<sup>10</sup> Huws and Spencer also published a short preliminary report on crowd work in Germany in November 2016 (Huws & Spencer, 2016). The preliminary report states that 14% of the German sample is doing crowd work. The final report, which was published only one month later estimates that 12%. The reasons behind the adjustment of the estimation were not explained in the final report.

In 2017, the German Federal Ministry of Labour (BMAS) funded a study by the Institute for Labour Economics (IZA) which concluded that 2.9% of German-speaking adults are crowd workers (Bonin & Rinne, 2017). Due to the high number of respondents who could not name the platform they were working for or mentioned platforms not related to crowd work, Bonin and Rinne assume that the findings overestimate the spread of crowd work (ibid.: 9f.). Hence, they adjusted the share of crowd workers to 0.85% of all German-speaking adults (ibid.).

The most ambitious project to provide a comparison between crowd work in different European countries was the COLLEEM survey, an international research project by the European Commission and the Joint Research Council (JRC) which concluded that 10.4% of the adult population in Germany have been involved in crowd work activities (Pesole et al., 2018).

The BMAS commissioned a second study, conducted by Oliver Serfling in 2018. This estimated that 4.8% of the German electorate are crowd workers (Serfling, 2018). The study methodology was heavily criticized (Serfling, 2019). In the wake of the discussion, Serfling published a second paper in early 2019 that adjusted the share of crowd workers to 2.9% of the resident population (ibid.). Since estimations of the size of crowd work differ significantly, the following section reports an in-depth comparative analysis of the five studies.

### **Understanding the inconsistent estimations of the size of the *crowd work* sector**

In order to understand the conflicting estimations, differences between central aspects of the research designs are scrutinised. Aspects a.) and b.) address the definition of the sample, while c.) analyses the data collection and sampling techniques. Finally, d.) discusses important aspects of the operationalisation of crowd work.

- a. Including vs. excluding minors and elderly people
- b. Including vs. excluding non-German residents
- c. Online survey vs. telephone interviews
- d. Current crowd work activities vs current and past crowd work activities

### **(a) Including vs. excluding minors and elderly people**

The comparison between the studies shows significant differences between the age groups considered for the crowd worker population. It is important to recall that the average crowd worker is younger than the population mean (see 2.3.2). It can be expected that if one sample overrepresents younger age groups, then it is likely that the estimated share of crowd workers is higher compared to estimations based on “older” samples.

Huws et al. (2016) studied a population in Germany between 16 and 70 years old. As this study takes people younger than 18 into account, the share of people younger than 24 is 14%. At the other end of the age spectrum, Huws et al.’s sample includes 27% of people between 55 and 70. In contrast, Bonin and Rinne (2017) focus on adults (over 18s), and consequently the age structure of this sample differs significantly from Huws et al.’s study; in Bonin’s study only 9.3% of people are younger than 24, while 25.8% of the respondents are older than 65.

The COLLEEM survey (Pesole et al., 2018) also takes adults in Germany into consideration. Unfortunately, no precise information concerning the age structure of the German sample is reported.

Serfling’s first study (2018) focuses on adults (over 18s), while his second report (2019) takes people older than 15 into account. In Serfling’s 2018 study, 7.7% of the sample are between 18 and 21 years old, which is significantly higher than the actual share of this age group within the electorate (3.6%, Bundeswahlleiter, 2017). In Serfling’s 2019 study, only 3.5% of the sample are between 15 and 21 (vs. 8.1%, Statistisches Bundesamt, 2018).

The comparison between the age structure of the samples demonstrates that there is no consensus about which age groups an estimation of the number of crowd workers should take into account. Especially the inclusion of minors and elderly people (70+) has the potential to influence the estimation, as age and doing crowd work is correlated (see 2.3.2). However, the significant deviation of the age structure of some samples (e.g. Serfling 2018, Serfling 2019) from official demographic statistics seems to have a limited effect on the estimation, as all studies report that the samples have been weighted according to demographic statistics when estimating the number of crowd workers.

### **(b) Including vs. excluding non-German residents in the study population**

Recent research has described how crowd work is often chosen by migrants, as digital work can be easier to access than traditional labour markets (Graham et al., 2017). Therefore, excluding non-German citizenship holders from the data might cause the estimations to be lower. Huws et al. (2016) focus on the resident population in Germany. It is unknown whether the survey was displayed in more than one language, therefore it cannot be stated whether non-German speakers had an opportunity to participate. Bonin and Rinne (2017) also focus on the general resident population, but exclude non-German speakers as the telephone interviews were conducted in German. The COLLEEM project considers the resident population, but does not state in which language the survey was available (Pesole et al., 2018). Serfling's first report (2018) exclusively focuses on the German electorate, which excludes residents without German citizenship. The study population was changed to the resident population in his second report (2019). Neither report mentions the language of the survey.

Important information on the available languages of the surveys is missing in all studies except the one by Bonin and Rinne. Only Serfling's first report (2018) excludes those without German citizenship from the study sample. In contrast to the assumption that focusing on the electorate leads to lower estimation, Serfling (2018) reports a higher share of crowd workers than his second report (2019). Therefore, it seems that this aspect, despite being important to avoid systematically neglecting non-German crowd workers in Germany, quantitatively plays a minor role in explaining empirical inconsistencies.

### **(c) Online survey vs. telephone interviews**

One major difference in the context of data collection is whether the data is collected via online surveys or computer-assisted telephone interviews. The choice between an online or offline study design has strong implications for the representativeness of the sample. In general terms, offline computer-assisted telephone interviews are usually preferred when it comes to ensuring the random selection of respondents, as computer-assisted telephone interviews come with the advantage that telephone numbers can be randomly selected by the computer software (Stock & Watson, 2012). In the case of online surveys, there is usually a bias, as respondents are required to make an active decision to participate in a certain online survey. Several empirical investigations compare the representativeness of online survey with offline data collection. One recent study by the German IFO institute showed that, especially in the context of investigating attitudes towards digital technologies, online surveys tend to produce biased estimations, as people with a positive attitude towards digital technologies showed a greater willingness to fill out online surveys (Grewening et al., 2018). Transferring this result to the discussion on crowd work, one can assume that studies on crowd activities are biased towards participants who are more active on online platforms. However, the representativeness of computer-assisted telephone interviews is also questioned by some scholars. Serfling argues that while respondents of online surveys are more likely to be engaged in crowd work activities, the reverse might be true for respondents of telephone interviews, as response rates have declined over the years (Serfling, 2019: 8). This raises the question of who is actually participating in telephone interviews. Serfling assumes that online surveys overestimate the share of crowd workers, and telephone interviews underestimate the share (2018).

Huws et al. (2016) used the iOmnibus online survey from the market research company Ipsos-MORI. Respondents were selected from Ipsos Panels or from “high-quality preferred panel providers where Ipsos panels are not available” (as stated by the Ipsos website n.d.). In Germany, the survey was distributed between the 1st and 4th of April 2016.

The COLLEM survey was conducted online by the market research company PPMI in the second half of June 2017 (Pesole et al., 2018). Both reports by Serfling were based on an online survey by the market research company Civey GmbH, which was distributed via several partner websites, such as news websites.<sup>11</sup>

The comparison showed that Bonin and Rinne's report (2017) is the only one that is based on computer-assisted telephone interviews.<sup>12</sup> It therefore applies the highest empirical standard in terms of ensuring the representativeness of the sample among these five empirical studies on the size of the crowd work sector. The fact that all online samples report a significantly higher share of crowd workers indicates that this could be an effect of relying on online rather than offline data collection methods. The fact that especially the European COLLEM survey (Pesole, 2018) reports a very high score of crowd workers compared to the findings based on telephone interviews in Bonin and Rinne (2017) underlines the need for further coordinated high-quality empirical data collections in order to scrutinize the crowd work sector across EU member states.

#### **(d) Current crowd work activities vs current and past crowd work activities**

An important dimension of the operationalisation of crowd work is the question of when to count a person as an active crowd worker, in contrast to those who have stopped doing crowd work. This discussion is especially relevant in the context of crowd work, because unlike standard employment based on regular fixed hours, crowd workers might experience time periods in which they are not able to secure jobs, while at other times working extensively when more jobs are available. This raises questions including: Is a person who finished his or her last job on Upwork eight months ago but is struggling to be hired since then a crowd

---

<sup>11</sup> Participation in a Civey survey requires active registration at the Civey Portal. The data for the first report included responses from July 2017 - 15.04.2018. The second report analysed responses from July 2017 - 15.10.2018.

<sup>12</sup> The researchers used the „EMNIDbus-CATI 100“ by the market research company Kantar Emnid Bielefeld's. They decided on a “Dual Frame” approach, meaning that they contacted 80% landline and 20% mobile numbers between 12.04.2017 - 20.06.2017.

worker? This depends on how the timeframe in the item/question that is presented to the crowd worker in the survey/interview is operationalised (“Have done work via online platforms within the last two weeks?” vs. “Have done work via online platforms within the last two years?”). The implication is intuitive: The more recent the time period in which one needed to do crowd work in order to be counted as a crowd worker, the lower the number of crowd workers.

Huws et al. (2016) did not specify how they operationalised being a crowd worker with regard to the time period in which the respondent needed to be active on an online platform. Bonin and Rinne (2017) asked whether respondents were currently (“derzeit”) doing crowd work.

The COLLEEM survey (Pesole et al., 2018) asks whether respondents have ever done crowd work activities. It thereby merges present and past crowd workers. One could assume that the fact that the COLLEEM survey merges past and present crowd workers partly accounts for its high estimation. The share of respondents that are frequently (monthly or more) doing crowd work is 78.3% of the identified crowd workers. It can be assumed that a significant share of the remaining 21.7% has only done crowd work in the past and is now inactive. Unfortunately, it is difficult to compare the numbers with the other studies, because they each operationalise “frequency of crowd work” differently. Consequently, the exact effect of mixing present and past crowd workers in the identification item cannot be assessed.

Serfling does not specify the relevant time period for the respondent in both reports (Serfling, 2018; Serfling, 2019). However, it is clear that present crowd work is meant, as Serfling gives the respondent the opportunity to answer that he or she is not doing crowd work, but did it in the past. Serfling further asks whether they intend to do more or less crowd work in the future, thereby introducing the concept of “crowd work affinity”. Figure 1. shows that crowd work affinity unifies the groups of past, present and future crowd workers. Serfling concluded that:

*“Summing across all three groups mentioned above, we find up to 10.7% of the German electorate being somehow related to crowdworking.” (Serfling, 2018: 17)*

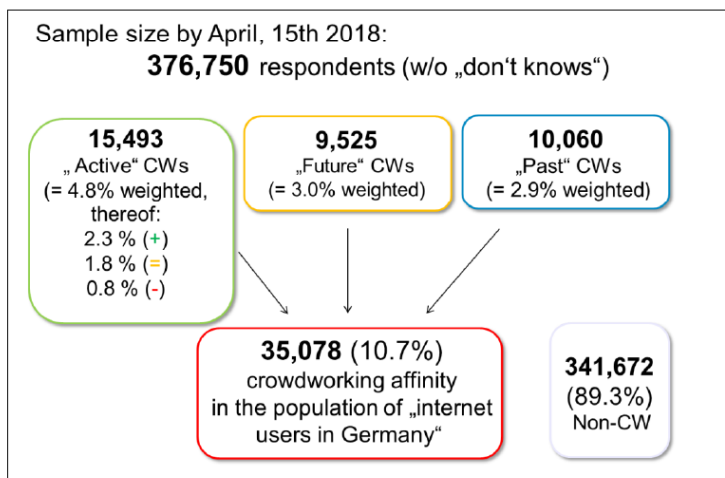


Figure 1: Sample size and crowd work categories (Serfling, 2018: 14)

This number is adjusted to 9.3% in Serfling’s second paper (2019). Although it should not be confused with an indicator for the current size of the crowd working sector, it can help to forecast future trends within the platform economy.

### Explanations for the inconsistencies

The comparison of the different studies on crowd work in Germany has shown a considerable variety of methodical attempts to sketch and measure the phenomenon of crowd work. Some aspects, such as excluding non-German citizenship holders, seem to be of minor importance, if they are significant at all. Other questions such as which age groups are included in the population demonstrate the need for a coherent empirical measurements in the context of crowd worker while it is difficult to estimate the explanatory power of considering difficult age groups for understanding the inconsistent estimations.

The different sampling strategies seem to be the most important factor causing these inconsistencies. It was striking that online surveys reported higher numbers of crowd workers than the results from the telephone survey. Only the study by Bonin and Rinne (2017) included any form of randomisation in the sampling process, while the other studies rely on non-



probability sampling. Finally, mixing present and past crowd workers is considered to increase the estimation.

However, these differences cannot completely explain the strong deviations between the estimations. Therefore, future conceptual and empirical studies on the crowd work sector are needed in order to be more confident about the size and the significance of the crowd work sector. Further, a meta-analysis that compares the empirical study by analysing the primary data sets would contribute to a more methodologically advanced understanding of the conflicting estimations of the size of “a crowd work sector”.

### **Alternative approaches to measuring**

As discussed above, especially online surveys about crowd work face many methodological problems when it comes to ensuring their representativeness. Consequently, further methods for estimating the relevance of the phenomena of crowd work have been developed. One of the most prominent examples is the Online Labour Index, developed by the Oxford Internet Institute, which provides a daily updated measurement of the traffic at selected crowd work platforms (Kässi & Lehdonvirta, 2018). This circumvents the problem of finding a representative sample of crowd workers, by exploiting company data. Although no direct conclusions about the actual number of active crowd workers can be drawn, and offline platforms are excluded from the index, this is a promising approach towards showing developments in the platform economy. For example, it has been used during the Covid-19 crisis to monitor the supply of work offered at online platforms during national lockdowns (Stephany, 2020).

---

### **2.3.2. Sociodemographic characteristics<sup>13</sup>**

Referring to the methodological problems described above, there is little empirical knowledge about specific sociodemographic characteristics of German crowd workers. Nevertheless, the studies presented offer some important trends of the working conditions of crowd work in

---

<sup>13</sup> The following structure is based on Serfling (2018).

Germany. Generally, there is agreement about these trends with regard to the percentages of gender, age and the employment status of crowd workers in Germany, which will be sketched in the following.

## Gender and age

The studies agree on the observation that men are slightly more represented among crowd workers than women in Germany are. According to the selection of tasks, as well as to the different platforms, it seems that men are more attracted by some tasks than women. These tasks refer mainly to consulting, testing and programming. With regard to writing tasks and “click work”, the female percentage is much higher. “Thus, we differentiated gender by the type of tasks implemented” (Serfling, 2018: 19; see also Huws & Joyce, 2016). With regard to age, there is an:

*“inverse linear trend of attitudes towards crowd working and age: the younger the age group, the higher the share of crowdworking affinity and active crowdwork compared to its population share.” (Serfling, 2018: 18)*

This observation seems coherent for this new type of work focussing on individual initiative, and flexible working patterns, as well as digital expertise. Despite the problems concerning the different age structure of the samples, as discussed in section 2.3.1, all the studies confirm that younger populations are more highly represented in the segment of crowd work than older workers. According to Huws et al. (2016), a fifth of all crowd workers is between 16 and 24, which would represent a very young population of crowd workers.

The result that young age groups are more involved in crowd work is further shared by additional empirical studies on crowd work. According to Leimeister et al. (2016), the average crowd worker is 37 years old. This high proportion of young people refers to the increasing technical expertise of the younger generation with regard to digital technologies. However, with regard to qualified platform tasks (Design, Multimedia, Innovation platforms etc.), age becomes less important (Leimeister et al., 2016).

## Employment status

The size of the crowd work phenomenon in Germany is strongly connected to the employment status of crowd workers. According to Serfling (2018: 24):

*“the majority (32%) of active crowd workers declares themselves as being self-employed, while the share of full-time employees (27%) is lower than the share of all respondents. This result seems to be plausible due to the nature of tasks that are distributed via platforms. Additionally, there are slightly more students (9% of the active crowd workers) and unemployed (8% of the active crowd workers) and fewer pensioners amongst crowd workers than in the overall respondent’s population (12.6% of the active crowd workers N/A).”<sup>14</sup>*

Status, as well as the social security model of self-employment, seems to be the key to whether crowd work is considered to be a phenomenon of the German labour population, or as a new type of work within the whole labour force. According to Serfling (2018), the share of self-employed crowd workers for highly qualified work (i.e. designing, consulting, programming etc.) seems comparatively high. In contrary, less qualified work (i.e. testing, writing etc.) and low qualified work (micro-tasking) is widespread among groups such as students, unemployed persons and pensioners. However, these results seem not very surprising, because the share of self-employed within “creative work” like design, consultancy and writing is high compared to other work activities in Germany. Nevertheless, there are tendencies of increased self-employment, which raises the question of how crowd work as a new type of work will contribute: either as an additional income within biographical complex working patterns, or as an institutional part of the work force, or even in both formats.

---

<sup>14</sup> In the 2019 report the numbers changed as follows: Self-employed (27.9%), Full-time (24.7%), Student (7.1%), Unemployed (12.6%) and Pensioners (18.4%).

---

### 2.3.3. Earning possibilities and task duration

The relation between task duration and earnings is a very important issue, specifically in the tension between demanding flexible work patterns versus forms of ‘decent work’ in Germany. Serfling concludes: “It was found that 47% of crowd workers do not rely on crowdworking as a primary source of income (previously 56%), while 28% (previously 22%) state that crowdworking is definitely their main source of income.” (Serfling, 2019: p. 2). The results from the COLLEEM survey report a similar trend: 23.9% of the crowd workers are receiving more than half of their income through crowd work, and for 37.2% crowd work accounts for less than 25% of their income (Pesole et al., 2018). Huws, et al. show that up to 25% of all crowd workers in Germany earn more than half of their income through crowd work. For only 3%, crowd work is the only source of income. For 63% of the crowd workers, earnings from crowd work make up less than 25% of their total income. (Huws, et al., 2016; see also Pongratz & Bormann, 2017). In the study of Bonin and Rinne (2017), the results are slightly different, because the focus lies on the regularity of income. Here, the sample shows that 31% of all crowd workers indicate that they make regular money, whereas 68% have an irregular income.

Apart from earning possibilities, further aspects related to task duration and complexity are crucial. According to a qualitative study on working experiences in “online work on Internet platforms” (Pongratz & Bormann, 2017), the level of satisfaction with task fulfilment differed significantly. This study reports a variety of time-consuming problems, which lead to a rather unfavourable relationship of task duration and earnings for many crowd workers. According to the workers in the sample, the first problem refers to the technical complexity of many platforms, as well as to quality control of the tasks. Since the quality control is standardised, this often leads to high complexity, and therefore to time-consuming problems in handling them technically. Another time-consuming problem mentioned by the workers, was the format and preparation of the tasks. Furthermore, communication seemed very difficult between employer and employee in the case of problems arising before and during the task performance. Finally, payment is typically calculated via the number of accomplished tasks

and not via the duration of task fulfilment. The study shows that the duration of task fulfilment is positively correlated with job dissatisfaction within the sample. This result refers to both high- and low-qualified work. The following quotation indicates the problems mentioned by the crowd workers:

*“Extremely bad earnings; fees under minimum wage, no personal contacts, no development with regard to contents, no professional perspective, no customer loyalty, no retirement arrangements, but many wonderful, but quite empty promises when recruiting new freelancers.” (Pongratz & Bormann, 2017: 169, translation by the authors)*

Other studies in Germany confirm that crowd work is usually paid by the fulfilled tasks and not by the hours workers needed to accomplish the tasks. Besides the general low level of salaries, this organisational structure further worsens the possibilities of adequate earnings in many cases due to manifold problems within the working processes. As Huws and Joyce (2016) state, these factors are going to further flexibilise work, which will lead to a significant impact of the work conditions of crowd work. But it also has a (negative) impact on other parts of the labour market with regard to dumping the price of human work.

---

#### **2.3.4. Empirical evidence from the field of food delivery**

In recent years, working conditions at food delivery platforms such as *Lieferando*, *Foodora* and *Deliveroo* have been controversially discussed by media, law makers and trades unions in Germany and beyond (Chapter 3). Protests of the riders have taken place in several cities, which have contributed to raising public awareness of the phenomena of crowd work and demonstrated that crowd work is more than merely an online phenomenon. Due to the importance of this form of crowd work to the public debate, this section especially focuses on the empirical evidence on “time-and place-dependent on-demand-work” (Vandaele, 2018: p. 13), namely, offline work organised via apps. Although platforms can operate on an international level, the concrete work is performed locally and can involve a range of services, e.g. mobility, repair, domestic services, delivery. Mainly three business models are relevant

for this type of work: platforms, which act as brokers for overnight stays (e.g. *Airbnb*); passenger transports (e.g. *Uber*)<sup>15</sup>; and delivery services (*Lieferando* in the German context) (Schmidt, 2017). In the German context, the field of “food-delivery” became very prominent, with a range of studies analysing this type of crowd work as a prototype for a new organisational model, namely the “algorithmic coordination of work” (Schreyer & Schrape, 2018). The principle of this type of work organisation has a strong control element:

*“Orders are awarded at short notice via online platforms to solo self-employed or marginally employed persons, whereby the platform companies behind them act as intermediaries, setting all the framework conditions and thus exercising ongoing control.” (Schreyer & Schrape, 2018: p. 267)*

Recent studies have analysed the working process, highlighting the precariousness of working conditions as well as the strong control mechanisms of the platforms (Heiland, 2019; Schreyer & Schrape, 2018).

Empirical evidence is mostly based on “anecdotal and individual findings”, predominantly from the field of food delivery (Heiland, 2019: p. 301). Heiland (2019) puts forward a first exploratory study of the socio-structural conditions, based on an online survey with “riders”; meaning the immediate delivery of food, mostly by bike. In Germany, 2000 - 4000 people work as riders. According to the sample in Heiland, there is a strong gender and age bias. Only 14%

---

<sup>15</sup> Because of strong protests by taxi drivers and their association, the German market is difficult for *Uber* to enter. The protests have led to specific German court decisions which imply that only professional drivers with a passenger transport permit are allowed to carry passengers. Consequently, *Uber* withdrew its services (*UberPOP*) in 2015. However, to date, *Uber* is active in five German cities with the service *UberX* (Berlin, Düsseldorf, Frankfurt, Köln, München) with a modified business model for the German market. *UberX* works only with professional drivers with a transport permit, driving rental cars (<https://orange.handelsblatt.com/artikel/52927>) (accessed: 11.8.2020).

of the riders are female, and the average age is 29. Educational level is rather high, but differs due to German citizenship: 62% of the sample were German, of which 53% had a higher education entrance qualification and 23% a university degree. From the non-Germans, 25% had a higher education entrance qualification and 51% hold a university degree. The riders work on average 72 hours per month. A high fluctuation of workers seems characteristic according to the studies. Unusual working hours are common: 87% of the riders work very frequently or often at weekends; 80% work in the evening (6 pm - 11 pm). With regard to contracts, 10% hold a permanent contract, 60% have a temporary contract and 30% are self-employed. Riders earn approx. 9€ per hour (excl. tips or boni). The net income of 39% of the riders is in the range of a mini-job (up to 450€/month); 30% work in the range of a midi-job (450.01-1.300€/month). 63% report that their monthly income can fluctuate by up to 300€. Therefore, 42% of the riders have a second job; around 30% of them receive further financial support (child or housing benefit, BAföG, other).



---

### 3. German media debate on crowd work

So far it has been shown that crowd work has become a topic for scholars interested in the intersection between labour relations and digital innovation. However, the debate on crowd work goes beyond the scientific discourse, as challenges posed by crowd work have been repeatedly featured by German and international media outlets over recent years. Although crowd work has become the subject of a range of empirical studies, the public discourse on crowd work in Germany has not yet been analysed properly. In order to address this gap, a media analysis has been performed to show how crowd work is taken up by German newspapers, magazines, and TV shows.

---

#### 3.1. Methods

In order to provide a comprehensive overview of the German media discourse on crowd work, the analysed newspapers and TV stations were selected to cover a wide range of the German media landscape, both in terms of political orientation and regional/national focus. The analysis features the German weekly newspaper *Die Zeit*; the weekly magazine *Spiegel* and its news websites *Zeit Online* and *Spiegel Online*; the magazines *Focus* and *Cicero* were also included.<sup>16</sup> *Die Zeit*/*Zeit Online* and *the Spiegel*/*Spiegel Online* are regarded as representing a liberal-centre position in the German media landscape, while *the Focus* and *the Cicero* stand for a conservative position<sup>17</sup>. The *Manager Magazin* and the *Handelsblatt* were analysed, which both stand for a market-liberal perspective. In addition, the regional daily newspaper *Kölner Stadt Anzeiger*<sup>18</sup> was included because of the expectation that regional discourses

---

<sup>16</sup> The circulation of the newspapers and magazines is: *Zeit*: 500.909 ([IVW](#) 2/2019); *Spiegel*: 714.280 ([IVW](#) 2/2019); *Focus*: 367.101 ([IVW](#) 2/2019); *Cicero*: 61.624 ([IVW](#) 2/2019); *Handelsblatt* ([IVW](#) 2/2019, Mo–Fr): 133.796; *Manager Magazin*: 112.692; *Kölner Stadt-Anzeiger*: 235.015 ([IVW](#) 2/2019, Mo–Sa). The traffic at the news websites is: *Zeit Online*: 11,79 Million unique users (AGOF January 2017); *Spiegel Online*: 19,01 Million unique users (AGOF, January 2017)

<sup>17</sup> The mentioned political biases of the publishers are based on an estimation by the database eurotopics.net, founded by the German Bundeszentrale für politische Bildung (Federal Agency for Civic Education).

<sup>18</sup> Cologne (Köln) is one of the cities in which riders have been most actively engaged in protest campaigns (e.g. *Liefern am Limit*) for better working conditions.

about crowd work exist, as some platforms are offering local offline services, such as food delivery. The TV stations *ARD* and *ZDF* were chosen as national representatives of German television, while *WDR*, *BR* and *SWR* were expected to offer a regional focus on the topic.

In order to conduct the analysis, all mentioned databases were searched via several key words related to crowd work.<sup>19</sup> Only results published between 01.01.2016 and 22.10.2019 that are related to the situation of crowd workers were considered.<sup>20</sup> The focus of the analysis was how German media take up crowd work, answering the following sub-questions:

- Which type of media is reporting on crowd work?
- Has there been a decrease/increase of articles on crowd work from 2016 to 2019?
- Which kind of platforms (following Vandaele, 2018) are the focus of media coverage?
- Is *crowd work* described as a beneficial or negative development for workers?
- How are labour unions or protest campaigns taken up by the German media debate?
- How is German media classifying the concrete phenomena at stake? Are working conditions (e.g. *Foodora*) discussed as issues only within the platform, within the branch (e.g. of delivery companies), or as an example of working conditions in the platform economy?

Out of 229 articles derived from the publishers' databases, 120 were chosen for the quantitative analysis, as they primarily deal with the platform economy discussing the issue of crowd work.<sup>21</sup> Unfortunately, 12 TV contents are no longer publicly accessible, so the final

---

<sup>19</sup> The decision was made to include both abstract keywords and specific platforms from every category proposed by Vandaele (2018). The keywords are: Plattformarbeit (platform work), Plattformökonomie (platform economy), gig-economy, gig-work, crowd work, crowdworker, crowdworking, Foodora, Deliveroo, clickworker, Amazon Mechanical Turk, Upwork, Jovoto, GigWork (a German social service platform).

<sup>20</sup> We want to give a picture of recent developments in crowd work. As the (self-)organisation of *crowd workers* forms a focus of this report, attention was paid to relate the time-period to the growing protests of *Foodora* and *Deliveroo* riders, which started in 2017 in Berlin. A longer time frame would have extended the scope of this report. However, crowd work has been discussed before 2016 by German media. An analysis of a longer time period will be left to future research.

<sup>21</sup> This includes articles that primarily deal with a specific platform or the platform economy in general while discussing the situation of *crowd workers*. In addition, articles which are directly dedicated to reports about *crowd workers* fall within this category.

number of analysed contents of the sample is 108. The remaining 109 articles are also related to crowd work or other issues of the platform economy, but discuss the topic in the context of a different discourse than crowd work and were therefore excluded from the analysis.

The articles were categorised quantitatively according to the type of crowd work, the evaluation of working conditions, whether and which labour unions are mentioned, and how the platform economy/crowd work is framed. This categorisation is based on the sub-questions named above. The operationalisation of the categories is presented at the beginning of the following subsections. The analysis is then enriched qualitatively by relevant media contents in order to illustrate the findings.

---

## **3.2. Analysis of the media discourse in Germany**

The analysis follows the structure given in the six sub-questions introduced above, and begins by showing which newspapers and TV stations reported the issue, and if an increase of articles over time can be observed. Then, it analyses how the working conditions are evaluated, and how campaigns and labour unions are taken up. Finally, it reveals how crowd work is discussed in the wider context of the platform economy. At the beginning of each section a table presenting the results of the quantitative analysis can be found, which also shows how the sub-questions were operationalised.

---

### **3.2.1. Who is reporting and when?**

Table 2 displays the amount of content by publisher per year. It reveals that most of the categories – liberal-centre newspaper, economy-friendly newspaper (especially the *Handelsblatt*), regional news and television picked up the topic of crowd work on a regular basis. In contrast, *Focus*, *Cicero*, the *Manager Magazine* and the SWR did not report regularly about the issue.

	2016	2017	2018	2019	total
ARD	0	0	2 (1)	2	4 (3)
BR	2	0	4 (2)	7 (4)	13 (8)
<i>Cicero</i>	0	0	0	0	0
<i>Focus</i>	0	0	1	0	1
<i>Handelsblatt</i>	3	4	8	9	24
<i>Kölner Stadt Anzeiger</i>	0	0	4	5	9
<i>Manager Magazin</i>	0	0	0	1	1
<i>Spiegel</i> (Online)	5	2	2	8	17
SWR	0	0	0	0	0
WDR	0	0	6 (5)	5	11 (10)
ZDF	0	1 (0)	7 (3)	2	10 (5)
<i>Zeit</i> (Online)	8	8	8	6	30
total	18	15 (14)	42 (34)	45 (42)	120 (108)

Table 2: Media contents dealing with the platform economy discussing the issue of crowd work

There was a significant increase in reports about the working conditions of crowd workers in 2018 compared to 2016 and 2017. This can be explained by the fact that food delivery platforms gained strong media attention in 2018 (see 3.2.2).

### 3.2.2. Which kind of platforms?

A huge majority of media content focuses on the type of crowd work framed as time-and-place-dependent on-demand-work (Table 3).

Online Micro Platforms (1)	Online Macro Platform (2)	Time-and-place dependent platforms (3)	1 & 2	1 & 3	2 & 3	1,2 & 3
6	2	85	2	3	2	8

Table 3: Type of platform, which is the focus of the content; N: 108

The situation of riders working for *Foodora* and *Deliveroo* is a major focus of many articles.<sup>22</sup> But it was not only the situation of German crowd workers that grabbed German media attention. There are also several articles reporting about the situation of *Uber* drivers in the US and UK (Sarovic, 2016). From time-to-time media content dealing primarily with the situation of workers doing online micro-crowd work has been published (Oberhuber, 2017). Further, some articles mention working conditions and power structures in the platform economy, while describing all three types of platforms (Elisa, 2019; Ritter, 2018). While *Foodora* and *Deliveroo* have become symbols for time-and-place-dependent on-demand platforms in the German media discourse, a platform which stands symbolically for micro-tasks could not be identified.

---

### 3.2.3. How are working conditions evaluated?

The analysis shows a strong trend of media contents highlighting the disadvantageous sides of crowd work (Table 4). Both specific and structural problems and challenges for crowd workers are discussed by many articles and reports. Examples of specific problems in the context of delivering platforms are: struggles while establishing works councils, insufficient support for repairing bicycles, buying mobile data plans, and delayed transfer of wages (Weiss, 2018). When it comes to micro-task platforms, remunerations below the minimum wage are criticised (Kramer, 2017). On a structural level, a shift within power structures away from the worker is discussed by questioning whether crowd workers can be categorized as self-employed, and whether they have enough protection by the welfare state (Heuser, Lobenstein, Rudzio & Weefing, 2018).

---

<sup>22</sup> Due the selection of keywords (including *Foodora* and *Deliveroo* as representatives of time-and-place-dependent crowd work) a bias towards food delivery platforms within time-and-place-dependent crowd work might exist. Many reports about *Uber* are therefore not included in the sample. An analysis of the German *Uber* and *Air'n'B* discourse (as the most prominent examples of time-and-place-dependent crowd work) is therefore left for future research. However, the finding that time-and-place-dependent crowd work is mentioned more often than online crowd work can be regarded as robust, as a selection of prominent online platforms were used as keywords.

Critical	Balanced	Positive
77	15	16

Table 4: Evaluation of conditions for crowd workers, N: 108

Interestingly, even the *Handelsblatt* (a liberal newspaper) articles, although being more diverse in their evaluation, emphasised the emergence of disadvantageous working conditions in the platform economy in Germany.<sup>23</sup> One article, e.g. argues that establishing a disruptive business model should not mean falling behind useful social institutions, such as the existence of works councils (Nagel, 2018). Another *Handelsblatt* article not only criticises low salaries but also the absence of labour unions for crowd workers (Tyborski, 2019).

Although the majority of content focuses on the mentioned downsides for workers, there are some balanced and positive evaluations as well. Especially TV reports included interviews with crowd workers, providing them with the opportunity to explain why they participate in the platform economy. Answers include for example, that working for a food delivery platform has the advantage of combining cycling as a hobby with flexible working hours that fit well in student life (Baumann, 2018). Further, platform officials occasionally defended the fairness of their business models, such as Niklas Ölsberg, CEO of Delivery Hero, who claimed that his platform provides the opportunity to realize hourly wages significantly above minimum wage regulations, while admitting that the situation at other platforms might be worse (Kapalschinski, 2018).

Positive reports are oftentimes linked to new business models within the platform economy. Two examples demonstrate media interest in platforms that at least claim to tackle social challenges within the labour market. For instance, one article deals with the German platform *Ohlala* for sex workers, which intends to increase the level of security for the mostly female workers (Kolosowa, 2018). It refers to the social challenge that sex workers often struggle to defend themselves against abusive behaviours by their clients. The platform is considered to

---

<sup>23</sup> 24 Handelsblatt articles: 13 negative, 7 balanced, 4 positive articles.

provide help in case of conflicts, since information about the clients is collected during the registration process. In the case of sexual abuse, the clients may be identified and penalized.

Two TV reports positively reported about the new platform *GigWork*, offering nursing services.<sup>24</sup> It is presented as providing benefits for crowd workers in terms of working time and payment, which are more beneficial than those of regularly employed workers. In regular contracts, nurses often have little influence on the shifts they have to do, and are under much pressure due to the shortage of nursing staff in Germany. The reports suggest that *GigWork* offers more flexibility concerning working hours and is therefore favoured by the users.

Within the analysed sample of media content, articles that discuss the global dimension of crowd work are rarely found. A major reason for the national focus is that the majority of the articles primarily deal with working conditions at food delivery platforms in Germany. However, it remains striking that while reports on specific platforms often discuss the phenomena in a wider economic context, the global perspective remains broadly neglected. Among the articles that mention the global dimension of crowd work, one argues against a regulation of crowd work. It states that although the wages in the platform economy might be below the national minimum, they are still above average in other parts of the world (Specht, 2019). Another emphasises the potential danger of a “race to the bottom” through global competition (Hill, 2017).

---

### **3.2.4. How are campaigns and labour unions taken up?**

German labour unions have developed various strategies to represent the interests of crowd workers (Chapter 4). Further, bottom-up protests and initiatives, especially in the food delivery sector, demonstrated that analogue forms of protests are still relevant in times of

---

<sup>24</sup> The platform has chosen a new business model connecting *crowd workers* with employers in the field of social services (nursing, gastronomy, and hotel). Unlike models of self-employment or being paid by the platform, employers using the platform offer a temporary work contract to the *crowd workers*.

digitalisation. Therefore, it is relevant to scrutinize whether these actors, labour unions and bottom-up initiatives were able to raise media attention. Almost half of the articles mention labour unions in the context of work in the platform economy (Table 5).

NGG	IG Metall	Ver.di	FAU	DGB	ILO	Foreign Unions	Fair Crowd Work	Ombuds Office for crowd workers	FairTube	No unions mentioned
24	10	9	4	2	1	4	2	1	1	58

Table 5: Mentions of labour unions and their initiatives; N: 108; multiple entries allowed

Again, a clear focus on food delivery platforms can be observed in Germany. The union NGG has received most media attention as it supported many riders of food delivery platforms in their efforts to establish works councils within their cities (Weiss, 2018). The unions IG Metall and Ver.di, but also the anarchist labour union FAU, which was involved in one of the first protests in Berlin, have been mentioned frequently in the media coverage (Baurmann & Rudzio, 2016; Kramer, 2017).

Despite unions having a prominent position in the discourse, the media coverage of crowd work in Germany also covers the success of self-organized forms of protest. The discourse about food delivery in Cologne within the *Kölner Stadt-Anzeiger* (KSA) is an illustrative example of this development. Their first articles neglect the working conditions of the riders, and focus on new advantages for consumers and restaurants (Wenzel, 2017). After some riders in Cologne spoke up and started protesting, the majority of articles published in the KSA report striking questions about the working conditions at *Foodora* and *Deliveroo* (Hinz, 2018; Tafferner, 2018). This demonstrates that bottom-up movements are able to change the focus of the media coverage towards a more critical stance on crowd work.

On a national level, the protest campaign *Liefern am Limit* was able to establish prominent figures, such as Sarah Jochmann and Orry Mittenmayer, who have been repeatedly featured by regional TV stations, especially the WDR. They were even invited onto the ARD talk-show



“Hart aber Fair” (Plasberg, 2018), where they raised attention to the working situation of food delivery riders in Germany. Legal action such as lawsuits for establishing works councils, or having a representative on the supervisory board has also been a very effective means to receive attention by the media (Nagel, 2018).

It is important to state that more reports deal with protests and initiatives at time-and-place-dependent platforms than at micro- and macro-online tasks platforms. When it comes to online crowd work only a few reports mention the IG Metal initiatives, such as faircrowd.work, fairtube<sup>25</sup> and the Ombuds Office for online crowd workers (Table 4). As presented above for delivery services, NGG’s support for offline riders has received much more public attention. There are several possible explanations. Unlike work via pure online platforms, food-delivery is visible in the public sphere and riders have direct contact with a huge number of people who order food via online platforms. Therefore, the phenomena of food delivery via apps is something vast parts of the German population are familiar with, so that no greater efforts are needed to introduce its existence to the greater public. Riders can directly use their visibility to raise awareness of working conditions. In the case of the IG Metall initiatives for online workers, this is different. Phenomena such as clickwork/micro-tasks are less well-known and need prior explanation. Further, faircrowd.work and the Ombuds Office can be classified as top-down initiatives. Consequently, they are lacking the narrative of courageous workers standing up for better working conditions, which is very present in media reports on food delivery platforms.

---

### **3.2.5. How is crowd work discussed in the platform economy?**

46 out of 108 media contents put working conditions at a certain platform, such as *Deliveroo*, in the bigger picture of work in the platform economy. In contrast, 56 contents, especially TV

---

<sup>25</sup> The campaign FairTube was featured by German and even international media several times. The fact that only two reports appear in the sample are related to a.) many reports were published after the data collection was completed, b.) FairTube was not used as a key word and the key words related to crowd work were often not used when writing about FairTube, and c.) publishers that reported about FairTube were not analysed.

reports, treat working conditions at platforms as isolated phenomena, either within the platform or within the branch (Table 5).

Specific Platform	Branch	Platform economy	Different context
19	37	46	6

Table 6: Level of abstraction; N: 108

Although only six reports deal with the situation at a certain platform in a context other than crowd work, such as non-standard work in general, or work in the delivering branch, they include two of the most prominent examples of the entire sample. The German comedian and late-night host Jan Böhmermann took up the riders' situation together with working conditions in logistics, namely parcel delivery at DHL and Hermes. Thereby, he played with an image of emerging delivery-proletarians, who were singing their "class anthem". This video has received in total 2 Million clicks on *YouTube* (Böhmermann, 2018). The comedian Oliver Welke criticized the riders' working conditions in the context of exploitation in Germany, focusing on cleaning forces and workers of the logistic branch (Welke, 2018).

In general, the motif of an emerging class of "digital-proletarians" can be occasionally found in the German discourse about crowd work. For example, one article quotes Rainer Hoffmann, chairman of the labour union association DGB, who called out the rise of "digital-proletarians" (Baumgärtel 2018). However, some articles emphasise that because of the heterogeneous group structure, a collective identity as "digital-proletarians" cannot yet be observed (Ritter, 2018).

---

### 3.3. Conclusions on the media analysis

The media analysis revealed that a wide spectrum of print media, which included liberal-centre and market-liberal as well as local newspapers, and TV stations, regularly picked up on crowd work during recent years.

There was a significant increase in media coverage in 2018 and 2019, which can be explained through the attention the situation of *Foodora* and *Deliveroo* riders in German cities have received.

Work-and-time-dependent platforms, again especially food delivery platforms, received most attention within the media discourse on crowd work by distance. Reports about micro online crowd work exist but are less frequent. Articles on macro online crowd work can be regarded as exceptional. Further there were many articles mentioning all three types of crowd work.

In sum, working conditions in the platform economy are broadly criticised based on the normative idea of institutionalised social standards of employment. By putting the situation at specific platforms into a wider context of new forms of work within the digital transformation, many articles state that German labour laws and the welfare state are incapable of facing the challenges brought forward by the platform economy. Instead of a neo-liberal call for further flexibilisation, even most authors of the content in market-liberal newspapers seem to agree that crowd workers should be guaranteed more social protection by the welfare state.

The role of labour unions has also been frequently discussed, either by referring to their own actions or to their collaborations with bottom-up movements. Together with self-organised protest and campaigns, labour unions have been key in bringing the topic to the media's agenda.

Furthermore, the extent to which offline crowd work (namely food delivery) has received more attention than online crowd work is significant. Although food delivery is coined as offline crowd work within the frame of the platform economy in many reports, food delivery is oftentimes treated as an isolated phenomenon. Alternative framings of these types of work are also expressed in the present media discourse, such as linking the situation at food delivery platforms to conditions within the parcel delivery branch.

---

## 4. Stakeholders, initiatives and collaborations in the field of crowd work

In the following, stakeholders, initiatives, actions and protests from the field of crowd work are presented to provide a comprehensive overview of who is engaged in shaping and governing labour relations in the context of crowd work in Germany. These comprise the Ministry of Labour, research foundations and all relevant German trades unions (IG Metall, Ver.di, NGG, FAU)<sup>26</sup>, as well as bottom-up initiatives, e.g. *Delivery at the Limit*. These were chosen based on desk research as well as on the information from two exploratory interviews<sup>27</sup>. They will be presented in two stages. First, the relevant stakeholders in Germany and their initiatives in the context of crowd work are presented. Several initiatives that are jointly executed by more than one stakeholder in the field will be summarized.

---

<sup>26</sup> The German landscape of unions relevant for the field of crowd work is as follows: The IG Metall (founded 1949) has about 2.2 million members from the areas of metals and electricals, iron and steel, textiles and clothing, wood and plastics, crafts and services, and information and communication technology. It is the most active union in the field of crowd work to date. The NGG was founded in 1949, but has predecessor organisations like the German Association of Tobacco Workers, founded in 1865. To date it represents employees in the sectors of food, beverages, tobacco, hotels and catering, and has about 200.000 members. It hosts the representation of food delivery riders (Campaign: *Liefern am Limit (Delivery at the Limit)*), which was successful in establishing a workers' council at *Foodora*. Further relevant union actors are Ver.di (the United Services Trade Union with about 2 million members), founded in 2001 as a fusion of 5 unions. With regard to crowd work it offers consultancy for the self-employed, collects member surveys on crowd work and organises events. The Freie Arbeiterinnen- und Arbeiter-Union (FAU), free workers' union from the left and anarchist spectrum was founded in 1977 with the Spanish sister union Confederación Nacional del Trabajo (CNT). In Germany, it is organised in 30 local syndicates and has about 800 members. It is sometimes used by gig workers for actions, especially at the beginning of rider protests in the field of food delivery.

<sup>27</sup> The first interview was with the German metalworkers' union (IG Metall), namely Robert Fuß, trade union secretary, 01.08.19 in Frankfurt am Main. Although crowd workers do not belong to the traditional clientele of the IG Metall, with regard to crowd work the IG Metall has been the most active union in Germany since 2012. The second interview was with the German union Nahrung-Genuss-Gaststätten (NGG) (Food-beverages-catering), namely Keno Böhme, project secretary, 14.08.19 via phone. Keno Böhme was active as a rider himself and then began to engage for workers' movements in the companies he was working at. He was one of the main actors of the campaign *Liefern am Limit (Delivery at the Limit)* starting in 2018, which turned out to be very successful. The campaign finally connected to the NGG formally.

---

## **4.1. Major stakeholders and their initiatives**

In order to give an overview about “who does what” in the field of crowd work in Germany, relevant institutions, organisations and associations, such as the responsible federal ministry, the unions’ research foundation, labour unions, bottom-up initiatives and important professional associations, including their initiatives in context of crowd work, are presented.

---

### **4.1.1. BMAS (Federal Ministry of Labour and Social affairs)**

The BMAS is one of fourteen federal ministries and is responsible for federal labour and social policies. Over recent years, it has developed a strong focus on crowd work.

#### **The work 4.0 dialogue process**

In 2015, the BMAS started a huge initiative on work 4.0 (the future of the labour society) with a focus on the digital transformation of the economy. There were milestones in this process, such as dialogues with the public, as well as with industry experts to shape the social conditions and rules towards the principle of “Good Work”. Unions, scientists, and companies were part of this process. After the publication of a political green and a white book on the topic, a new format called “experimental spaces” was launched where the “future of work” could be experimented practically. Within the white book, policy options for crowd work are discussed in the context of self-employment (BMAS, 2015). It generally states that the question of whether crowd workers are bogus-self-employed workers comes down to the individual case. Clarifying employment status is within the responsibility of the jurisdictional branch. Further, the white book states that by the time of publication no significant increase in crowd work activities could be observed. However, the need for further empirical knowledge is recognized, and it is stated that when a significant growth in the crowd work sector takes place, a reform of the existing forms of employment status might become necessary (ibid.). Moreover, for self-employed workers, the white book demands integration into the public pension insurance, which would also affect crowd workers.

### **The Policy Lab Digital, Work & Society**

“The Policy Lab Digital, Work & Society” (Denkfabrik digitale Arbeitsgesellschaft) was established as a policy think tank in 2018<sup>28</sup>. In addition to artificial intelligence and power relations, the platform economy is one of its three focus topics. In a series of events, trade unions, employers and scientific experts exchanged their views. Several blog posts have been published on the website and a YouTube channel was created. One article, published by a member of the Policy Lab Digital, Work & Society, includes the most specific ideas of the policy lab on policy options (Scholle, 2019). These include a discussion of how to include crowd workers in public accident insurance, to guarantee labour unions the opportunity to contact the workers of a platform, and to strengthen platform cooperatives. While the Policy Lab succeeded in providing discussion platforms for stakeholders and in funding empirical studies, it remains unclear whether concrete policies on crowd work will follow by the time of finishing this article (June 2020).

### **Joint Activities**

In early 2019, the BMAS published a policy paper on the conditions at food delivery platforms in cooperation with the union NGG (see 4.2.3.). Labour Minister Hubertus Heil decided to function as a patron for the bottom-up initiative, *Delivery at the Limit*, and attended the Riders Day in 2018. This demonstrates that bottom-up movements in the context of crowd work were able not only to raise media attention (Chapter 4), but also to receive support from the highest level of government. It further demonstrates that the Federal Labour Ministry, which has made the governance of the digital transformation a top-priority, acts responsively towards bottom-up movements in the context of the platform economy.

---

<sup>28</sup> <https://www.denkfabrik-bmas.de/en/about-us/policy-lab-digital-work-society-re-imagining-work> (accessed: 11.8.2020)

---

#### **4.1.2. Hans Böckler Foundation**

The Hans Böckler Foundation (HBS) is a German foundation with a strong focus on research on labour relations, on behalf of the DGB, the Confederation of German Trades Unions.

##### **Future of work commission**

The HBS not only funded studies on crowd work. It also organised an expert commission on the “future of work” (2015-2017). This commission analysed how the structure of employment conditions is changing in the course of digitalisation, globalisation and social value changes, and how a new order of the labour market could look, which guarantees fair rules and good standards. In 2017, the commission published its recommendations in the book, “Let’s transform work” (Jürgens et al., 2018) and has been continuing to address the topic. In the context of crowd work, possible pathways have been outlined, including the need to refine employment categories and to consider promoting alternative platforms such as platform cooperatives (Jürgens et al., 2018). In the aftermath of the book, many reports on crowd work were published by the Hans Böckler Foundation (Lücking, 2019; Schneider-Dörr, 2019).

##### **Digital social security (DSS)**

A very concise contribution in this context is the proposal by Prof. Dr. Enzo Weber<sup>29</sup> on “digital social security (DSS)” to organise social insurance even in the context of the platform economy (Weber, 2019). In short, the idea is to implement a digital mechanism in the platforms that transfers a certain percentage of the agreed remuneration to an individual digital social security (DSS) account for the crowd worker each time a job is completed. This is part of a digital system of personal accounts on which the contributions from all platform orders are accumulated. At regular intervals, the collected contributions are then transferred to the social security system of the crowd worker's country of residence. Here, claims are generated

---

<sup>29</sup> Institute for Employment Research (IAB)

in established national structures. This policy proposal stands out as it is one of the few which aims at solving challenges caused by crowd work on a global level.

---

#### **4.1.3. IG Metall (Industrial Union of Metalworkers)**

The IG Metall represents workers with members mostly from the manufacturing sector, but also from information and communication technology branches. To date, IG Metall has been the most active union in the field of crowd work, with various activities.

##### **First initiatives**

For the IG Metall, the topic of crowd work has been on the union's agenda since 2012. The topic was initiated by a talk by Prof. Dr. M. Leimeister at a union conference. Different types of initiatives started, which were crucial in order to finally include crowd work in the union's strategy: First, the book publication by Christiane Benner, who has been a board member of the IG Metall since 2015, presented a first collection of contributions on crowd work (Benner, 2015). Second, in 2015 the statutes of the IG Metall were amended so that solo self-employed persons are also admitted to membership.

##### **Joint activities**

IG Metall was a major contributor to the "Frankfurt Declaration on Platform-Based Work", which was published in 2016 and signed by a network of international labour unions (see 4.2.1.). It includes demands for fair working conditions in the platform economy. These include the de-facto payment of at least minimum wages, access to national social security policy and the right to collective action. It also resulted in the creation of the website <http://faircrowd.work> (see 4.2.2.), which is an information platform for crowd workers in several European countries. Further, IG Metall was one of the initiators of the Ombuds Office, which was established for crowd workers at several German clickwork platforms (see 4.2.3.). Finally, IG Metall collaborated with the bottom-up YouTubeUnion for the *FairTube* Campaign to improve working condition for YouTubers (see 4.2.6.).



Within the landscape of crowd work in Germany, IG Metall can be seen as a good example of a traditional labour union that, despite having competences in the production sector, is now discovering new forms of work as a potential means to reach out to new target groups.

---

#### **4.1.4 NGG (Food, Beverages and Catering Union)**

The NGG represents employees in the sectors of food, beverages, tobacco, hotels and catering, and is active in representing crowd workers from food delivery platforms.

##### **Founding of works councils**

In the German market of food delivery, to date, *Lieferando* has a monopoly-like position. In the past, the NGG was successful in setting up works councils at *Foodora*, where riders are marginally employed with a fixed-term contract. Most recently, after two years they were successful at setting up a works council in Münster on 1.10.2019. However, currently the NGG has to develop strategies either to transfer these local works councils to *Lieferando*, or to start finding new works councils. Recent media reports mention that after *Lieferando* had postponed the works council elections, the first *Lieferando* works council in Cologne was elected in April 2020 (Schwär, 2020). How the situation in other cities will develop is not clear at the time of finishing this working paper (June 2020), as merging the structures of *Lieferando* and *Foodora* has not yet been completed.

##### **Joint activities**

The NGG is mainly active in representing food delivery riders. In December 2018, it partnered with the bottom-up initiative *Liefern am Limit (Delivery at the Limit)* (see 4.2.5.) In February 2019, NGG published a joint paper with the Federal Ministry of Labour and Social Affairs, dealing with the need to improve working conditions at food delivery platforms (see 4.2.4.). Thereby, the NGG demonstrates that traditional labour unions and bottom-up movements are not mutually exclusive ways to govern labour relations, but can enter into fruitful cooperation.

---

#### 4.1.5. Delivery at the Limit

The field of food delivery takes an interesting development in Germany. Riders started to organise via WhatsApp chat groups in several German cities, especially in Cologne, and evolved into maybe the most influential bottom-up movement in the context of crowd work in Germany.

##### **Social media campaign**

*Delivery at the Limit* at its heart is a social media campaign, which was launched in early 2018 and informs about working conditions at food delivery platforms. The posts deal with specific problems at delivery platforms, with calls for collective action and general developments of the labour market from an employee perspective. It is liked by more than 3200 persons on Facebook, and received much attention by the German media (see Chapter 3).

##### **Joint activities**

As the initiative was steadily growing, the initiative looked for institutional backing. At first, it had links to more left-wing groups like the FAU, but the initiative became too big for these groups, and it finally joined a traditional trade union, the NGG, on 01.11.2018. One of the most important activities of *Delivery at the Limit* were two big protests in Cologne and Hamburg; the Riders Days in 2018 and 2019 (see 4.2.5.). Both were jointly organised with the NGG. One of the initiators of *Delivery at the Limit* is now working as a trade union secretary. Further, the initiative is supported at the highest political level (its patron is e.g. Hubertus Heil, Federal Minister of Labour); the initiative was invited to the committee “Work” at the German parliament and received strong support from “Die Linke” and the SPD. While there are currently approx. 2,000 - 4,000 riders in Germany, the joint-activities of the NGG and *Delivery at the Limit* managed to organise a number of them within the NGG.

*Delivery at the Limit* can be seen as the most prominent and successful bottom-up movement in the context of crowd work in Germany, which realised that for further growth cooperating with existing structures can prove to be a fruitful approach.

---

#### **4.1.6. Ver.di (German United Services Trade Union)**

Ver.di is a multi-service trade union, and represents workers employed in over 1.000 different trades and professions. Although not as active in the context of crowd work as IGM and NGG, it has initiatives to consult self-employed workers and comments on recent developments in the platform economy.

##### **Consultancy of Self-employed**

Ver.di offers an advice service for “cloudworkers”, as termed on their website. It is conceptualised as consultancy from solo self-employed, for solo self-employed. Next to information on crowd work available on the website, Ver.di offers collegial consultation on an individual basis, which can be requested via Ver.di’s portal [selbststaendigen.info](http://selbststaendigen.info). This advice service can be accessed by members for free; non-members pay a fee of 15€ per 15 minutes of consultancy. The consultancy is done via the internet. Further, the membership within the union offers legal advice and, if necessary, protection, e.g. for problems with clients or social insurance.

##### **Ver.di’s reaction to AmazonFlex<sup>30</sup>**

In 2017, there have been protests against Amazon Flex’s business models from a bottom-up initiative (not named) which voiced its protest on the shopping highlight day „Black Friday“ in Berlin. There were also protests organised by Ver.di that integrated the protests against Amazon Flex in general strikes against the working conditions at Amazon.

---

<sup>30</sup> Since November 2017, Amazon developed a new business model in the field of delivery services: Amazon Flex. The principle of Amazon Flex is that private persons deliver Amazon parcels as delivery partners. The only precondition is a smartphone, a driving licence and their own car. Amazon promises an hourly income of 25€ on its website. In the US this business model seems to be successful in big cities (where workers started to organise via Whatsapp and facebook), but the future development is open for Germany so far. In parallel, Amazon builds up further subsidiary companies to strengthen its market power in the delivery branch.

## **Ver.di's reaction to the emergence of E-Scooters<sup>31</sup>**

The recent application of the crowd work model to the maintenance and charging of E-Scooters, was often criticized in the public discourse. Ver.di has been the most effective labour union in raising awareness of accusing the bad working conditions in this branch. In August 2019, the spokesman of Ver.di Bavaria warned that crowd workers, working for E-Scooter platforms, are remunerated below the national minimum wage. Further, a longer article about the issue was published in Ver.di's member magazine. However, specific measures on organising these crowd workers have not yet been taken by Ver.di (01/2020).

---

### **4.1.7. FAU (Free Workers Union)**

The free worker union (FAU) is part of the left and anarchist spectrum. It is active in organising crowd workers from food delivery platforms.

#### **Deliverunion**

*Deliverunion* is a campaign by FAU, founded in 2017, which aims at raising awareness of the riders' working conditions. It has a strong focus on supporting foreigners working as crowd workers in Germany. On the campaign websites several demands for better working conditions are published. These include compensation for all work-related repairs of the bicycles, and an additional euro per hour.

#### **First protests in the field of Food delivery**

In the beginning of the protests of riders, the union FAU was used as a form of representation and organisation by employees of the Gig Economy, such as employees of online food delivery

---

<sup>31</sup> Since summer 2019, electro scooters have been introduced in German cities. The scooters belong to partly global companies that distribute them to the urban space. During the night, the scooters have to be charged. The task of charging is outsourced by the companies to the "crowd" and organised via a platform. As the only precondition, a trade certificate is necessary. Guided by an app, the persons collect the scooters in the evening; they put them into their private cars and charge them on their private sockets. In the morning, they have to be taken back to the streets at certain places, again guided by the app. They earn approx. 4€ per scooter. Some media articles take up the work practices of persons collecting scooters. Until now, the workers are not organised by an initiative or union, it can however be expected that this will be the case in the near future.

services. In June 2017, FAU-organized demonstrators unloaded bicycle scrap in front of the *Deliveroo* headquarters in Berlin to protest against the company's policy on requiring riders to use their own bikes.

While the FAU was actively involved in the first public protest of crowd workers in Germany and continues to work with riders, it has not received the same amount of attention as *Delivery at the Limit*. This may be explained by the fact that because of the far-left orientation of the FAU, *Delivery at the Limit* is more compatible with mainstream labour unions such as the NGG, and political stakeholders like the Federal Labour Ministry.

---

#### **4.1.8. YouTubers Union**

The YouTubers Union is a bottom-up union for YouTubers. It was founded by the successful German YouTuber Jörg Sprave in 2018 (Stephen, 2019). Its goal is to represent YouTubers and improve their working conditions. It demands, for example, monetary revenues also for small YouTube channels, transparent censor decisions, equal treatment of all creators, and better access to YouTube's contact persons in the case of removal of a YouTube channel. Organising supporters of the YouTubers Union takes place online, in a forum and a Facebook group, which has more than 27.000 members (06.2020). That the YouTubers Union was able to spread ideas on collective action within the YouTubers' community, demonstrates the potential of bottom-up initiatives to reach target groups, which can hardly be accessed by traditional labour unions.

#### **Joint activities**

In 2019, the YouTubers union teamed up with IG Metall for the campaign *FairTube*, which will be further described in section 4.2.6.

---

#### **4.1.9. German Crowdsourcing Association**

The German Crowdsourcing Association represents the interests of several German crowdsourcing platforms as their lobby organisation.

### **Code-of-Conduct**

The German Crowdsourcing Association launched a code of conduct in 2017, which was signed by nine platforms from the field of crowd work (online work). In this code of conduct the parties commit themselves to conformity with the law, fair payment, good work, respectful interaction, clear tasks at a reasonable timing, regulated approval processes and data protection. In total, the platforms count approximately two million workers' registrations.

### **Joint activities**

In cooperation with the IG Metall, the German Crowdsourcing Association established an Ombuds Office in 2017, in order to resolve disputes between crowd workers, clients, and crowdsourcing platforms (see 4.2.2.).

---

#### **4.1.10. Taxi and Rental Car Association (BZP)**

The taxi and rental car association is a German lobby organisation, which represents the interests of German taxi and rental car companies. It was founded in its present form in 1984. The association is currently opposing flexibilization of the German taxi market that would grant access to business models as pursued by *Uber* in the United States.

### **Taxi drivers' protest**

In 2014, protests by taxi drivers and German legislation made the market unattractive for platforms like *Uber*. In February 2019, the Ministry of Transport announced plans for a liberalisation of the German transport service market, with the consequence that new mobility service providers could enter the market. In April 2019, the German Taxi and Rental Car Association (BZP) called on drivers in about 30 German cities to protest against the planned liberalization of the market. To date, no further decisions have been made. However, the Federal Minister of Transport (Andreas Scheuer, CSU) set up a commission with representatives of the federal states and parliamentary groups for the planned reform for autumn 2019. The taxi drivers' association is observing the developments and is prepared for further protests.

---

## 4.2. Joint initiatives

One of the major characteristics of the German crowd work landscape is that many initiatives are jointly organised by more than one stakeholder. The range of collaborations includes not only joint action by labour unions, but also by unions and bottom-up initiatives, and by unions and professional associations. This demonstrates the importance of rethinking established forms of protest and activities in the digital working society.

---

### 4.2.1. The Frankfurt Declaration on Platform-Based Work

The first International Workshop on Union Strategies in the Platform Economy was held in Frankfurt, 13-14 April 2016. Trades unions from the US, Sweden, Denmark, Austria and Germany convened in order to coordinate strategies for dealing with the crowd work phenomena. The discussions resulted in the *Frankfurt Declaration*, which states several demands for fair crowd work. These include, to name a few examples, the need to clarify the employment status of crowd workers, the right to organise, compliance with minimum wages, and access to the welfare state. The *Frankfurt Declaration* can be seen as one of the most notable cooperations between labour unions from different countries in the context of crowd work.

---

### 4.2.2. Website faircrowd.work (IG Metall + several European unions)

The website <http://faircrowd.work/> was launched in 2017 by the IG Metall and European unions from Austria and Sweden. This website offers, 1.) platform reviews of 8 crowd work platforms, including information on payment as well as allowing ratings by workers; 2.) information on union support for crowd workers (Germany, Austria, UK, Sweden, US); 3.) advice for workers via a free hotline; 4) information on crowd work for journalists, policy makers and the public, and 5.) legal information for crowd workers. The website is available in German and English. The ratings of platforms demonstrate how the involved labour unions are open towards forms of governance, such as publicly shaming platforms with bad working conditions, which go beyond collective bargaining and lobbying for more regulation.

---

#### **4.2.3. Ombuds Office (IG Metall + German Crowdsourcing Association)**

The Ombuds Office was jointly initiated by eight European crowdsourcing platforms in 2017, as well as by the German Crowdsourcing Association (Deutscher Crowdsourcing Verband), and the IG Metall. Its task is to resolve disputes between crowd workers, clients, and crowdsourcing platforms on the basis of the “Crowdsourcing Code of Conduct”. On the Ombuds Office board, platforms and workers are equally represented: A labour judge acts as the Board’s neutral chair, and members are from the German Crowdsourcing Association (Deutscher Crowdsourcing Verband), the platform Testbirds, substituted by content.de in 2018, a crowd worker and IG Metall officials.

According to the annual report, in 2017, seven cases were claimed, five were resolved, and two were not followed-on by the complainant (Ombuds Office, 2019). In 2018, 23 cases were processed. Of these cases, 15 could be clarified by mutual consent; in three cases the Ombuds Office made a decision; one case was a general complaint which was forwarded to the specific platform; one case was from a platform which did not sign the Code of Conduct, and three cases are still being processed.

In addition to specific individual cases, in which comparatively small sums of money are frequently in dispute, complaints of a fundamental nature are also submitted concerning procedures or technical problems. In order to provide solutions, the Ombuds Office has proposed to create e.g. a forum in the form of a crowd advisory board, in which the crowd workers can get involved in order to help improve the procedures and functionality of a platform.

The Ombuds Office can be regarded as a good example of how corporatism, an idea at the heart of the German welfare state and labour relations, can look when facing the challenges of new forms of work.



---

#### **4.2.4. Joint Policy Paper on Digital Work (NGG and BMAS)**

The Food and Catering Union NGG presented a joint policy paper with the Federal Ministry of Labour and Social Affairs in February 2019 (NGG, 2014). It was published on the 2nd Riders Day Germany in Hamburg. It deals with the working conditions of food delivery and addresses challenges posed by the platform economy. Both NGG and the Ministry claim that fair working conditions and appropriate social protection must also be applied to food delivery and other gainfully employed persons whose work is organised via online platforms - regardless of whether the activity is performed as an employee, as self-employed or as freelancer (ibid.).

---

#### **4.2.5. Riders Day (Delivery at the Limit and NGG)**

There were two big protest organised by *Delivery at the Limit* and NGG in the last two years, called Riders Day.

The first Riders Day took place in Cologne on the 19.06.2018, and was attended by Labour Minister Hubertus Heil. In the context of this protest a shared resolution of *Delivering at the Limit*, the NGG and the DGB was published, which demands better working conditions in the platform economy.

From 7-8<sup>th</sup> February 2019, a nationwide meeting took place in Hamburg, the 2<sup>nd</sup> Rider's Day of *Foodora*, *Deliveroo* and *Lieferando* bicycle couriers. It was jointly hosted by NGG and the initiative *Delivery at the Limit*. Travel costs were covered by the NGG for its members. Discussion took place around rights as an employee and setting up works councils, but also how to enforce collective agreements.

The Riders Days, together with the first protest organised by the FAU, are the most prominent examples of protests of crowd workers in Germany.

---

#### **4.2.6. FairTube (YouTubers Union and IG Metall)**

The YouTubers Union, an organisation for video creators, started the *FairTube* campaign together with the IG Metall in 2019<sup>32</sup>. Both entities demand from YouTube transparency on rules and decisions, an independent arbitration of moderation disputes and an advisory board in which a YouTuber should have a voice. The initiative called on YouTube to take up discussions within four weeks, otherwise a legal complaint would have been started. A meeting with YouTube was scheduled in Google's office in Berlin on the 22.10.2019. Since YouTube rejected negotiations with Jörg Sprave, the founder of the YouTubers Union, IG Metall cancelled the meeting as a form of protest. In the aftermath of the conflict, *FairTube* called upon YouTubers to send letters of protest to YouTube's headquarters in California. In March 2020, Jörg Sprave announced in the YouTubers Union Facebook group that they have been able to resume talks with YouTube, and that YouTube seemed willing to incorporate feedback from the campaign. Three months later, in April 2020, Jörg Sprave updated the Facebook community that after negotiations, YouTube decided to establish an "Unlisted Video Review" procedure. This enables content creators to reassure the compatibility of videos with the conditions for monetisation before making them public on YouTube, which was an initial demand of the campaign. These recent successes provide further evidence that joint ventures between bottom-up movements with a high visibility and established labour unions can effectively achieve improvements in the context of labour relations at online platforms.

---

#### **4.3. Conclusions: Initiatives and actions on crowd work in Germany**

The collected snapshots of the public debate and activities on crowd work show that the phenomenon of crowd work has an impressive career in Germany. Discussions, political proposals and actions for crowd workers are not only anchored in union strategies but are

---

<sup>32</sup> <https://www.fairtube.info/de/> (accessed: 11.8.2020)

also addressed by the main political actors in this field, such as the Federal Ministry of Labour and Social affairs, or the Hans Böckler Foundation.

With regard to the unions, it seems that a certain “division of labour” has been developed. In this respect, the IG Metall can be regarded as a main player in the societal discourse. In cooperation with platforms, it institutionalised formats to deal with crowd work (like the Ombuds Office, or the fair crowd work website); it reaches out to new kinds of crowd workers (*Fairtube*), and started cooperation on crowd work with international unions. The IG Metall mainly takes care of “micro crowd work” (which partly also includes “macro crowd work”) and has recently widened its portfolio to creative digital workers, e.g. YouTubers.

The NGG is taking care of the field of food delivery (as “time-and-place-dependent on-demand work”), which is by far the most dynamic field, where many actions have taken place, like protests of riders or the establishment of works councils. This accordingly received most of the public attention in Germany in recent years.

Ver.di supports specific kinds of workers “as required”, with their offer of online consultation for the self-employed, e.g. creative workers, as well as the support of actions or protests in specific fields, like delivery services. The FAU, as a small and “alternative” union, was especially present when protests on crowd work started in Germany. However, they are not a major player in the field today.

After the unions, other initiatives are relevant for the organisation of protest in this field. The highest impact is the initiative *Delivery at the Limit*, which only started two years ago and now belongs to the NGG. Also, in other fields, protest is voiced from the bottom or by branch associations, like in the case of Amazon Flex, or transport services.

With regard to the different types of crowd work (Vandaele, 2018) it can be stated that “time-and-place-dependent on-demand work” raised by far most of the protests by workers, and also actions through union support. In contrast, for the field of “Online micro crowd work”, it seems that a general agreement has been reached between workers, platforms and trades

unions, which has been stabilised by instruments like the Ombuds Office or the Code of Conduct. The final type of crowd work, "Online macro crowd work", is in principle covered by IG Metall or Ver.di, however there are no prominent actions or initiatives. Whereas creative workers are covered by Ver.di, especially for highly-qualified IT specialists, initiatives or actions are missing. Here, a slot for future actions could exist, although experience has shown that highly qualified and creative labour is very difficult to organise.

In addition, as the field of crowd work is highly dynamic, new types of work are developing within the market, such as in the field of mobility (e-scooters), or social services (GigWork-platform). The unions or other initiatives have not yet taken up these newly developing forms of crowd work.

---

## 5. Main conclusions

From the beginning, the German discourse on crowd work can be characterised by its critical observation of this new type of labour. However, especially at the beginning of the discourse, beneficial options for crowd workers were also raised, representing a “beautiful new working world” which promised values such as new forms of virtual collectivity, innovative ways of knowledge sharing, freedom, and gains in individual autonomy in “new” types of work.

Given the developments in recent years, the following hypotheses are proposed representing the current stage of the German discourse on crowd work:

- In the German debate, the phenomenon of crowd work can be framed as a continuation and aggravation of the long process of flexibilisation of labour activities that began in the 1990s with the restructuring of (global) value chains. Technological as well as organisational innovations hereby play a crucial role in order to establish crowd work as an individual type of work activity. Today, it is no longer just a question of outsourcing tasks to other business units or external companies along the value chain, as was discussed in the context of globalisation. Rather, a new quality of outsourcing processes is reached, as now – through digital crowd work – individual work tasks can be outsourced to any person worldwide with an internet connection.
- In Germany, the discourse on crowd work is strongly influenced by the political and scientific debate on the “digitalisation of work”. Technological innovation and its potential for the transformation of work play a crucial role. However, this potential also triggers the reflexion on “future models of work”, implying ideas of sustainable work and human-oriented working conditions.
- In Germany, crowd work was first introduced as online micro- and macro-crowd work by national as well as international platforms. Since 2017, there has been a strong focus on food delivery, being the most prominently discussed form of crowd work in Germany now. Some types of crowd work, like internal forms of crowd work or knowledge-intensive IT services are rather neglected by the current discourse.
- By now there is a high diversity of crowd work in terms of business models, technical modalities (digital platforms), and organisational principles, as well as motives to do crowd work. This variety is also reflected by the difficulties in providing a comprehensive

definition of crowd work as well as the methodological problems in compiling robust data on the empirical evidence of crowd work in Germany.

- With regard to this variety, clear political strategies focussing on the protection of workers are difficult to develop. However, there are strong efforts to improve the situation of crowd workers. These efforts focus on institutional issues in order to integrate crowd work under the traditional instruments, which are in place for the “regular” German labour-force.
- From the very beginning, the unions started to debate crowd work in a critical way and highlighted the disadvantages of this type of work. This position strongly shaped the public and scientific discourse on crowd work. This is supported by the media analysis, where critical observations have been also taken up by liberal newspapers and magazines.
- Further research on crowd work should focus on the methodological problems, as well as on the stabilization of the empirical evidence of crowd work in Germany. In addition, so far neglected forms of crowd work (IT-services, internal forms of crowd work) should be analysed both in quantitative and qualitative terms. Finally, exploratory studies on newly emerging types of crowd work, e.g. in mobility or social services, are relevant in order to keep track of the dynamic development of the platform economy.

---

## References

- Baukrowitz, A., Berker, T., Boes, A., Pfeiffer, S., Schmiede, R. & Will, M. (Eds.) (2006): *Informatisierung der Arbeit - Gesellschaft im Umbruch*. SIG Metalla.
- Baumgärtel, T. (2018, May 5): Karl Marx: Was hätte er zum Internet gesagt? *Zeit online*. Retrieved from: [https://www.wisonet.de/document/ZEIO\\_\\_e448f48f041863aa41271ef2831f43bf75e018a7](https://www.wisonet.de/document/ZEIO__e448f48f041863aa41271ef2831f43bf75e018a7) (accessed: 11.8.2020)
- Baumann, T. (2018, April 29): *Bericht aus Berlin*. Retrieved from: <https://www.ardmediathek.de/daserste/video/bericht-aus-berlin/bericht-aus-berlin/daserste/Y3JpZDovL2Rhc2Vyc3RlcmRlL2JlcmIjaHQgYXVzIGJlcmxpbj8zNjY1MzU5Zi1iNDI3LTRmNTltYjU2YS00MTJmYWJiMWVkdNDM/> (accessed: 11.8.2020)
- Baurmann, J. G. & Rudzio, K. (2016, April 21). Crowdfunding: Die neuen Heimwerker. *Die Zeit*. Retrieved from: <https://www.zeit.de/2016/18/crowdfunding-freelancer-digital-arbeitsmarkt> (accessed: 11.8.2020)
- Benner, C. (Ed.). (2015): *Crowdwork - zurück in die Zukunft? Perspektiven digitaler Arbeit*. Bund-Verlag.
- Berg, J., Furrer, M., Harmon, E., Rani, U. & Silvermann, M.S. (2018): *Digital labour platforms and the future of work. Towards decent work in the online world*. International Labour Office, International Labour Organization. Retrieved from: [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms\\_645337.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_645337.pdf) (accessed: 11.8.2020)
- Boes, A.; Kämpf, T., Langes, B., Lühr, T. & Steglich, S. (2014): Cloudworking und die Zukunft der Arbeit: Kritische Analysen am Beispiel der Strategie ‚Generation Open‘ von IBM. Beratungsstelle für Technologiefolgen und Qualifizierung (BTQ) im Bildungswerk der Vereinten Dienstleistungsgewerkschaft (ver. di im Land Hessen e.v.).
- Böhmermann, J. (2018, November 29): Ausgeliefert: Das Paketprekariat. *Neo Magazin Royal*. Retrieved from: <https://www.youtube.com/watch?v=Rp1hERCvGKo> (accessed: 11.8.2020)
- Boltanski, L. & Chiapello, E. (2005): The new spirit of capitalism. *International journal of politics, culture, and society*, 18(3-4), 161-188.
- Bonin, H. & Rinne, U. (2017): *Omnibusbefragung zur Verbesserung der Datenlage neuer Beschäftigungsformen. Kurzexpertise im Auftrag des Bundesministeriums für Arbeit und Soziales*. IZA Institute of Labour Economics. Research Report Series No. 80. Retrieved from: [http://ftp.iza.org/report\\_pdfs/iza\\_report\\_80.pdf](http://ftp.iza.org/report_pdfs/iza_report_80.pdf) (accessed: 11.8.2020)
- Börner, F., Christoph, K. & Nierling, L. (2017): *Chancen und Risiken mobiler und digitaler Kommunikation in der Arbeitswelt. Endbericht zum TA-Projekt*. Büro für Technikfolgen-Abschätzung beim Deutschen Bundestag (TAB). Retrieved from: <https://www.tab-beim-bundestag.de/de/pdf/publikationen/berichte/TAB-Arbeitsbericht-ab174.pdf> (accessed: 11.8.2020)
- Bsirske, F., Schröder, L., Werneke, F., Bösch, D. & Meerkamp, A. (Eds.) (2012): *Grenzenlos vernetzt? Gewerkschaftliche Positionen zur Netzpolitik*. VSA-Verlag.
- Bundesministerium für Arbeit und Soziales. (BMAS) (2016): White Paper Work 4.0. Retrieved from: [https://www.bmas.de/SharedDocs/Downloads/EN/PDF-Publikationen/a883-white-paper.pdf?jsessionid=4A3C88987F3C92A27F73921BB1A26D6A?\\_\\_blob=publicationFile&v=3](https://www.bmas.de/SharedDocs/Downloads/EN/PDF-Publikationen/a883-white-paper.pdf?jsessionid=4A3C88987F3C92A27F73921BB1A26D6A?__blob=publicationFile&v=3) (accessed: 11.8.2020)
- Bundestag (2013): *Schlußbericht der Enquete-Kommission ‚Internet und digitale Gesellschaft‘*. [Drucksache 17/12550]. Retrieved from: <http://dipbt.bundestag.de/dip21/btd/17/125/1712550.pdf> (accessed: 11.8.2020)

- Drahokoupil, J., & Jepsen, M. (2017): The digital economy and its implications for labour: 1. The platform economy. *Transfer: European Review of Labour and Research*, 23(2), 103-107.
- Elisa, S. (2019, May 2): Tagelöhner im Nebenjob. *Die Zeit*.
- Flecker, J. (2000): Sachzwang Flexibilisierung"? Unternehmensreorganisation und flexible Beschäftigungsformen. In H. Minssen (Ed.), *Begrenzte Entgrenzungen. Wandlungen von Organisation und Arbeit*. 269-291
- Flecker, J., Holtgrewe, U., Schönauer, A. & Gavroglou, S. (2009): Value chain restructuring and company strategies to reach flexibility. K.U. Leuven.
- Gewerkschaft Nahrungsmittel-Genuss-Gaststätten (2019, February 07): "Arbeitsbedingungen dürfen nicht den Algorithmen einer App überlassen werden" Retrieved from: <https://www.ngg.net/presse/pressemitteilungen/2019/grundsatzpapier-von-bmas-und-ngg-plattformvermittelte-arbeit-gut-gestalten/> (accessed: 11.8.2020)
- Graham, M., Hjorth, I. & Lehdonvirta, V. (2017): Digital labour and development: impacts of global digital labour platforms and the gig economy on worker livelihoods. *Transfer: European Review of Labour and Research*, 23(2). 135-162.
- Grewenig, E., Lergetporer, P., Simon, L., Werner, K. & Woessmann, L. (2018): Can Online Surveys Represent the Entire Population? IZA Institute of Labor Economics. [Discussion Paper No. 11799]. Retrieved from: <http://ftp.iza.org/dp11799.pdf> (accessed: 11.8.2020)
- Heiland, H. (2019): Plattformarbeit im Fokus. Ergebnisse einer explorativen Online-Umfrage zu plattformvermittelter Kurierarbeit. *WSI Mitteilungen*, 72(4), 298-304
- Heuser, U. J., Lobenstein, C., Rudzio, K. & Weefing, H. (2018, April 26): Was machen wir morgen? *Die Zeit*.
- Hill, S. (2017, February 16): Digitalisierung: ‚You're fired!‘. *Die Zeit*. Retrieved from: <https://www.zeit.de/2017/08/digitalisierung-roboter-technologie-ablehnung> (accessed: 11.8.2020)
- Hinz, I. (2018, February 3): Deliveroo und Foodora: Kuriere protestieren gegen ihre Arbeitgeber. *Kölner Stadt-Anzeiger*. Retrieved from: <https://www.ksta.de/wirtschaft/Deliveroo-und-Foodora-kuriere-protestieren-gegen-ihre-arbeitgeber-29606692> (accessed: 11.8.2020)
- Hoffmann, R. & Suchy, O. (2016): Aussichten für die Arbeit der Zukunft. Diskussionspapier aus der Kommission „Arbeit der Zukunft“, Hans Böckler Stiftung, Düsseldorf, 80.
- Howe, J. (2006, January 6): The Rise of Crowdsourcing. *Wired*. Retrieved from: <https://www.wired.com/2006/06/crowds/> (accessed: 11.8.2020)
- Huws, U. (2006): Conclusions, hypotheses and research questions. In U. Huws (Ed.), *The transformation of work in a global knowledge economy: towards a conceptional framework*, 197-207.
- Huws, U. & Joyce, S. (2016): Crowd working survey. The size of Germany's 'Gig Economy' revealed for the first time. University of Hertfordshire. Retrieved from: [https://www.uni-europa.org/wp-content/uploads/2016/11/crowd\\_working\\_survey\\_Germany.pdf](https://www.uni-europa.org/wp-content/uploads/2016/11/crowd_working_survey_Germany.pdf) (accessed: 11.8.2020)
- Huws, U., Spencer, N. & Joyce, S. (2016): Crowd work in Europe: Preliminary results from a survey in the UK, Sweden, Germany, Austria and the Netherlands. University of Hertfordshire.
- Ipsos (n.d.). Online Omnibus (I-Omnibus). Retrieved from <https://www.ipsos.com/en-us/solutions/total-operations/online-omnibus-i-omnibus> (accessed: 11.8.2020)
- Jürgens, K., Hoffmann, R. & Schildmann, C. (2018): Let's transform work! Recommendations and proposals from the Commission on the Work of the Future (No. 376). Study der Hans-Böckler-Stiftung.
- Kässi, O. & Lehdonvirta, V. (2018): Online labour index: Measuring the online gig economy for policy and research. *Technological forecasting and social change*, 137, 241-248.
- Kapalschinski, C. (2018, April 4): Lieferkurier muss kein schlecht bezahlter Job sein. *Handelsblatt*. Retrieved from: [https://www.wiso-net.de/document/HB\\_\\_98F4DA11-9D72-44FC-B311](https://www.wiso-net.de/document/HB__98F4DA11-9D72-44FC-B311)



56B47263A80D%7CHBPM\_\_98F4DA11-9D72-44FC-B311-56B47263A80D (accessed: 11.8.2020)

- Kirchner, S. (2019): Arbeiten in der Plattformökonomie: Grundlagen und Grenzen von ‚Cloudwork‘ and ‚Gigwork‘. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 71, 3-25.
- Kolosowa, W. (2018, October 16): Sexarbeit: Wie Facebook für Escorts und Freier. *Zeit online*. Retrieved from: <https://www.zeit.de/arbeit/2018-10/sexarbeit-app-ohlala-dating-prostitution-online> (accessed: 11.8.2020)
- Kramer, B. (2017, November 10): Foodora-Fahrer: Behandelt Foodora seine Mitarbeiter fair? *Zeit online*. Retrieved from: <https://www.zeit.de/arbeit/2017-11/foodora-fahrer-proteste-gewerkschaft-verhandlungen> (accessed: 11.8.2020)
- Krings, B. (2018): Digitalisiert, effizient & global? Die fortlaufende Technisierung der Erwerbsarbeit. In A. Hausstein & C. Zheng (Eds.), *Industrie 4.0/Made in China 2025* (pp. 165-181). KIT Scientific Publishing.
- Leimeister, J.M., Durward, D. & Zogaj, S. (2016): Crowd Work in Deutschland: eine empirische Studie zum Arbeitsumfeld auf externen Crowdsourcing-Plattformen. Hans-Böckler-Stiftung, Band 323
- Lücking, S. (2019): Arbeiten in der Plattformökonomie. Über digitale Tagelöhner, algorithmisches Management und die Folgen für die Arbeitswelt. Report Nr. 5, Hans-Böckler-Stiftung
- Nagel, L.-M: (2018, April 11). Falsche Disruption. *Handelsblatt*.
- Oberhuber, N. (2017, September 12): Testbirds: Die 250.000-Testvogel-Fabrik. *Zeit online*. Retrieved from: <https://www.zeit.de/arbeit/2017-09/testbirds-produkttest-crowd-arbeitszeit-spass> (accessed: 11.8.2020)
- Ombuds Office (2019): Report of the activities of the Ombuds Office of the Code of Conduct for Paid Crowdsourcing, 2017-2018. Frankfurt am Main.
- Pesole, A., Brancati, U., Fernández-Macías, E., Biagi, F. & González Vázquez, I. (2018): Platform Workers in Europe. EUR29275 EN, Luxembourg: Publications Office of the European Union. doi: <https://doi.org/10.2760/742789>. (accessed: 11.8.2020)
- Plasberg, F. (2018, April 30): Hart aber fair. Retrieved from: <https://www.youtube.com/watch?v=zv4e56jBGaw> (accessed: 11.8.2020)
- Pongratz, H.J. & Bormann, S. (2017): Online-Arbeit auf Internet-Plattformen: Empirische Befunde Zum ‚Crowdworking‘ in Deutschland. *AIS-Studien*, 10(2), 158-181.
- Ritter, J. (2018, January 18): Crowdwork: Selbstständig? Abhängig! *Zeit online*. Retrieved from: <https://www.zeit.de/arbeit/2018-01/crowdwork-selbststaendigkeit-digitale-arbeit-arbeitsbedingungen-interview> (accessed: 11.8.2020)
- Sarovic, A. (2016, October 28): Britische Uber-Fahrer sind jetzt offiziell Arbeitnehmer. *Spiegel Online*.
- Scholle, T. (2019): Plattformökonomie – Sachverhalte und Regelungsbedarfe. *Soziales Recht*. 28-34.
- Schneider-Dörr, A. (2019): Erwerbsarbeit in der Plattformökonomie: Eine kritische Einordnung von Umfang, Schutzbedürftigkeit und arbeitsrechtlichen Herausforderungen (No. 116). Working Paper Forschungsförderung.
- Schmidt, F.A. (2017): Arbeitsmärkte in der Plattformökonomie - Zur Funktionsweise und den Herausforderungen von Crowdwork und Gigwork. Studie für die Friedrich Ebert Stiftung, Bonn.
- Schreyer, J., Schrape, J.-F. (2018): Algorithmische Arbeitskoordination in der plattformbasierten Gig Economy: Das Beispiel Foodora. *Arbeits- und Industriesoziologische Studien*, 11(2), 262-278.
- Schröder, L. & Urban, H.-J. (Eds.) (2014): Jahrbuch Gute Arbeit 2014. Profile prekärer Arbeit - Arbeitspolitik von unten. Bund-Verlag.
- Schwemmler, M. & Wedde, P. (2012): Digitale Arbeit in Deutschland. Potentiale und Problemlagen. Studie für die Friedrich-Ebert-Stiftung. Bonn

- Schwär, H. (2020, April 08): Polizeieinsatz bei Lieferandos Betriebsratswahl – Streit mit Fahrern eskaliert. Retrieved from: [https://www.gruenderszene.de/food/startups-trends/lieferando-betriebsrat-wahl-streit-polizei?interstitial\\_click](https://www.gruenderszene.de/food/startups-trends/lieferando-betriebsrat-wahl-streit-polizei?interstitial_click) (accessed: 11.8.2020)
- Scrninek, N. (2016): Platform capitalism. Cambridge: Polity.
- Serfling, O. (2018): Crowdfunding Monitor Nr. 1, Monitoring für das Verbundprojekt. Retrieved from: [https://www.bmas.de/SharedDocs/Downloads/DE/PDF-Meldungen/2018/crowdfunding-monitor.pdf?\\_\\_blob=publicationFile&v=1](https://www.bmas.de/SharedDocs/Downloads/DE/PDF-Meldungen/2018/crowdfunding-monitor.pdf?__blob=publicationFile&v=1) (accessed: 11.8.2020)
- Serfling, O. (2019): Crowdfunding Monitor Nr. 2, Für das Verbundprojekt „Crowdfunding Monitor“
- Specht, F. (2019, January 22): Entwicklung zulassen. *Handelsblatt*.
- Stephany, F. (2020): The pandemic depresses online labour markets, but some countries are bouncing back – Insights from South Korea, Germany, and the United States [Blog post]. Retrieved from: <https://ilabour.oii.ox.ac.uk/following-the-trace-of-the-pandemic-a-comparison-of-online-labour-demand-from-korea-germany-and-the-united-states/> (accessed: 11.8.2020)
- Stephen, B. (2019, September 26): YouTube says it won't negotiate with the YouTubersUnion. The Verge. Retrieved from: <https://www.theverge.com/2019/8/26/20833315/youtube-union-youtubers-negotiate-germany-meeting> (accessed: 11.8.2020)
- Stock, J.H. & Watson, M.W. (2012): Introduction to econometrics (Vol. 3). Pearson.
- Tafferner, A. (2018, June 20): Fahrradboten treffen den Minister. *Kölner Stadt-Anzeiger*.
- Tyborski, R. (2019, July 30): Arbeiten am digitalen Fließband. *Handelsblatt*. Retrieved from: [https://www.wisonet.de/document/HB\\_\\_EED97981-E7324F5C87B536DC21308C7C%7CHBPM\\_\\_EED97981-E732-4F5C-87B5-36DC21308C7C](https://www.wisonet.de/document/HB__EED97981-E7324F5C87B536DC21308C7C%7CHBPM__EED97981-E732-4F5C-87B5-36DC21308C7C) (accessed: 11.8.2020)
- Urzi Brancati, C., Pesole, A., Fernández-Macías, E. (2019): Digital Labour Platforms in Europe: Numbers, Profiles, and Employment Status of Platform Workers, EUR 29810 EN, Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-08955-1, doi:10.2760/16653, JRC117330.
- Vandaele, K. (2018): Will trade unions survive the platform economy? Emerging patterns of platform workers' collective voice and representation in Europe. Working Paper 2018.05 etui
- Weber, E. (2019): Digitale Soziale Sicherung. Entwurf eines Konzepts für das 21. Jahrhundert. Working Paper, Hans Böckler Stiftung.
- Weiss, F. (2018, April 18): Mein Arbeitgeber ist mein Feind - Kampf der Deliveroo-Fahrer. *Reporter*.
- Welke, O. (2018, May 4): Deliveroo, shame on you! *Heute Show*.
- Wenzel, F.T. (2017, February 18): Viele Lieferdienste - wenig Profit. *Kölner Stadt-Anzeiger*.

KIT Scientific Working Papers  
ISSN 2194-1629

[www.kit.edu](http://www.kit.edu)